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ABSTRACT

The programs developed in Austria, England, France, Germany, the Netherlands, Norway, and Sweden to allow vocational students to acquire qualifications with a dual orientation toward employment and higher education were characterized and compared in a study. Three groups of programs were identified: those extending over an integral part of the whole educational sector (the vocational programs/streams in Norway's and Sweden's comprehensive school systems); those referring to individual courses/qualifications (France's Baccalaureat, England's General National Vocational Qualifications, the long courses of the Netherlands' senior secondary vocational education); and those representing pilot projects within the established systems of vocational education/training (Germany). Although all programs allowed for a dual orientation, they differed in the relative weight attributed to either employment or higher education. Most programs (in England, Germany, the Netherlands, Norway, and Sweden) were part of the initial vocational training provided at the upper secondary level for 16-19 year olds. The following general integration strategies were recommended: separate general/theoretical subjects; vocational application of general/theoretical subjects; education and training related to transferrable skills; and action-oriented education and training (projects). (Sixteen figures are included. Appended are the following: a list of abbreviations; titles of the national case studies; information about the study's study authors and partner institutions; and a project outline.) (MN)

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# QUALIFICATIONS WITH A DUAL ORIENTATION TOWARDS EMPLOYMENT AND HIGHER EDUCATION

## A COMPARATIVE INVESTIGATION OF INNOVATIVE SCHEMES IN SEVEN EUROPEAN COUNTRIES

## INTEQUAL REPORT I

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# QUALIFICATIONS WITH A DUAL ORIENTATION TOWARDS EMPLOYMENT AND HIGHER EDUCATION

## A COMPARATIVE INVESTIGATION OF INNOVATIVE SCHEMES IN SEVEN EUROPEAN COUNTRIES

## INTEQUAL REPORT I

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**November 1996**

**WIFO (Research Forum Education and Society), Berlin**

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The report is the product of the combined efforts of 16 authors from seven countries. Their contributions in preparing the individual chapters and offering advice on the overall comparison are gratefully acknowledged. In the final stage of producing a coherent text for publication, support respecting language and layout was given by John and Stephan Manning.

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# Chapter 1

# SUMMARY

**Sabine Manning, WIFO, Berlin**

## The characteristics of the schemes

§ 1 One of the basic issues in vocational education and training in EU countries, highlighted in the action programme LEONARDO, is how to increase the attractiveness and status of initial vocational education and training. Essentially, this is a question of improving the quality of vocational education and training.

§ 2 A specific approach initiated in a number of countries is to provide the option for trainees or students of vocational courses to acquire qualifications for university access alongside their vocational qualifications. This is based on varying degrees of combination or integration of general and vocational education. It is connected with efforts to achieve parity of esteem between vocational and general education, and between work-based and knowledge-based learning.

§ 3 The resulting qualification has a dual orientation towards employment and higher education (**DUAL QUALIFICATION**). The present project focuses on an in-depth analysis of a selection of recent schemes of dual qualification which have been implemented in seven countries of the EU and EFTA. The schemes are characterised by features including the following:

§ 4 **DIMENSION OF THE SCHEMES WITHIN THE EDUCATION SYSTEMS**. According to this criterion three groups may be distinguished:

1. Schemes which extend over an integral part of the whole educational sector such as the vocational programmes or streams within the comprehensive school systems of Norway and Sweden;

2. Schemes which refer to individual courses or qualifications, e.g. the Vocational Baccalauréat (Bac Pro) in France, the General National Vocational Qualification (GNVQ) in England, the long courses of senior secondary vocational education (MBO) in the Netherlands and the WIFI Academy courses in Austria;

3. Schemes representing pilot projects within the established systems of vocational education and training (Germany: Bavaria and Brandenburg).

§ 5 **THE BALANCE OF DUAL ORIENTATION.** While all schemes allow for a dual orientation, they differ in the relative weight attributed to either employment or higher education. Several of them put the emphasis on employment as the prior aim (the schemes in Austria, France, the Netherlands and Sweden). This is likely to apply to the vocational streams in Norway as well, although the Reform 94 aims at a balance of the two orientations for the total provision of upper secondary education. The two remaining schemes (in England and Germany) imply a fairly equal weighting of the two progression routes.

§ 6 **THE LEVEL OF VOCATIONAL TRAINING / THE TARGET GROUPS.** Most of the schemes (in England, Germany, the Netherlands, Norway and Sweden) are part of the initial vocational training which is provided at upper secondary level for 16-19 year olds. The English, Norwegian and Swedish schemes are also open to adult students. The French scheme is specific in offering advanced education and training for students who have already completed initial vocational courses or certain stages of them. In Austria, the scheme is exclusively geared to adults who are already qualified in a vocational area.

### The comparative assessment of the schemes

§ 7 The development of individual schemes is determined by several common factors, which range from the economic to the technological, social and educational. Among them, a special emphasis on factors related to educational aims can be observed:

§ 8 **AUSTRIA** and **GERMANY**. New schemes have been introduced which are designed to overcome the gap between general and vocational education, and in particular to raise the attractiveness of initial vocational education for high-level achievers (Germany) and to create vertical pathways within further education (Austria).

§ 9 **ENGLAND**. The ongoing reform of education has aimed at creating a coherent national qualifications framework with three different pathways: general, vocational and a middle one with dual orientation (GNVQ).

§ 10 **FRANCE**. Starting out from the need for higher qualification standards, the intention has been to bring the majority of young people up to baccalauréat level and, by creating the vocational baccalauréat (Bac Pro), to also meet the demand for a new category of industrial technicians.

§ 11 **THE NETHERLANDS**. The increasing educational demands of young people, especially for a double qualification already in operation (MBO), has put the question of further developing its dual orientation on the agenda.

§ 12 **NORWAY** and **SWEDEN**. National reforms were initiated to reorganise the education system, particularly at upper secondary level, in such a way that it would be able to meet the demands of both the individual and society for lifelong learning and would enable everybody to obtain qualifications for employment as well as for access to higher education.

§ 13 Several aspects of the structure, contents and didactics are relevant for the schemes of dual qualification:

§ 14 **FLEXIBILITY IN CURRICULUM DESIGN.** Flexible structures of the curriculum, with a frequent use of modular patterns, have been introduced in the schemes of several countries. They are above all intended to connect and in part integrate general and vocational subjects or units of learning.

§ 15 **EMPHASIS ON DEVELOPING PERSONAL COMPETENCE**. Several concepts and terms used in the various national schemes centre on a new approach to learning which aims at developing personal competence in a complex and active way and which goes well beyond the division into general and vocational abilities.

§ 16 **COLLABORATIVE WORK OF TEACHERS**. The integration of academic and vocational qualifications calls for a closer cooperation between general subject teachers and vocational teachers. These two categories of teacher represent different backgrounds and traditions, so that the functional integration of teaching is difficult to operate. In addition, the teacher in an active learning environment takes over a new function as adviser rather than instructor and has to cope with independent-minded students who have a say in their own learning process.

§ 17 **COOPERATION BETWEEN SCHOOLS AND ENTERPRISES**. Most of the schemes link school-based and work-based learning, including mandatory practical assignments (France, the Netherlands, Sweden), supplementary ones (England) or traineeships (Norway, Germany). This approach implies a need for functional cooperation between schools and enterprises, and between teachers and trainers or workers.

§ 18 There are several indicators which reveal the impact of the schemes, for instance the range of candidates entering a scheme, the rate of success within a scheme, the use made of the dual orientation as pathways, the skill level achieved in subsequent employment and the success rate in higher education studies. The actual scope of schemes to be included in this assessment, however, is limited in that most of the schemes are still in their introductory or pilot phase. Altogether, the analysis suggests that the schemes considered will require a careful and ongoing process of implementation and revision in order to fulfil their dual role effectively.

### In focus: the integration of vocational and general education

§ 19 A key question which has accompanied the whole investigation is the extent to which vocational and general education are or can be integrated. The comparative analysis takes account of two dimensions which are assumed to be relevant for the qualifications with dual orientation: (I) the relationship of education and training to skilled work and (II) the relationship of general education to vocational training.

§ 20 The curricula of the schemes provide for a variety of combinations involving vocational and general education, ranging from the additive to the integrative type of approach:

(A) Separate general/theoretical subjects;
(B) Vocational application of general/theoretical subjects;
(C) Education and training related to transferable skills;
(D) Action-orientated education and training (projects).

The conclusions drawn from the comparison include the following points:

§ 21 There is, altogether, an emphasis on the additive combination of vocational and general education (A), with the latter being extended particularly in individual options. Three schemes focus on this (Sweden, the Netherlands, Norway), and most of the others include it as a vital part. The relevance of the additive combination seems to be fairly independent of the scheme's relationship to skilled work.

§ 22 Next to this, the vocational application of general subjects as the first stage of integration (B) is relevant, both as a focus (England, Germany: Bavaria) and in combination with other stages of integration (Austria, France). The relevance of applied subjects can be observed in schemes with differing relations to skilled work.

§ 23 The advanced stages of integration - training related to transferable skills (C) and action-orientated education and training (D) - are characteristic of two schemes (Austria, Germany: Brandenburg) which have, at the same time, the strongest relation to skilled work. These schemes display the potential of work-based education and training for the development of transferable skills, including study skills. Advanced forms of integration, particularly project work, are also represented as components of all the other schemes.

§ 24 The evidence suggests that several ways of combining general and vocational education (A to D) are fairly independent of or easily adaptable to different categories of courses. If this proves to be the case, it suggests that there is considerable opportunity for exchange and transfer of experience across schemes and national systems.

§ 25 It is also apparent that the schemes of dual qualification, in this specific function and in their national context, apply or indeed create both innovative course structures and curricula and didactic approaches, all of which are of wider significance for qualitative advance in vocational education and training.

## Chapter 2

## INTRODUCTION

**Sabine Manning, WIFO, Berlin**

### 2.1 GENERAL AIM OF THE PROJECT

One of the basic issues of vocational education and training in EU countries, highlighted in the action programme LEONARDO, is how to increase the attractiveness and status of initial vocational education and training. Essentially, this is a question of raising the quality of vocational education and training.

As has been stated in a special resolution by the Council of the European Union[1], "vocational training should become more attractive to the most able and ambitious young people and thus lose its image as a second-rate alternative in the eyes of those young people who are now in increasing numbers aspiring to university or further education." This is linked to the recognition of the importance of attempting to give equal value to both general education and vocational training. To achieve this, it is recommended that vocational training should have the constant objective of promoting general qualifications and personal and social skills as well as developing professional competence. Also, basic or continuing vocational qualifications should open up opportunities for university study.

This policy corresponds to the national priorities set for vocational education in individual European countries in the context of the challenge of the single market and of structural changes in qualification requirements and in the social demand for advanced education. Several measures aim at enhancing the attractiveness of vocational education, promoting its quality and establishing the equivalence of general and vocational education.

One approach initiated in a number of countries is to provide the option for trainees or students of vocational courses to acquire qualifications for university access alongside their vocational qualifications. This is based on varying degrees of combination or integration of general and vocational education. It is connected with efforts to achieve parity of esteem between vocational and general education, and between work-based and knowledge-based learning.

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[1] European Union/The Council (Ed.): Quality and Attractiveness of Vocational Education and Training - Draft Resolution. No. 11355/94; RESTREINT; EDUC 89; SOC 334. Brussels, 25 November 1994.

The resulting qualification opens up alternative routes into professional work and advanced studies. While "double qualification / Doppelqualifikation" is a common term for this in a number of countries, including Austria, Germany and the Netherlands, the term "integrated qualification" was used in the proposal for this project because of its emphasis on the qualitative aspect of integrating general and vocational education. In the course of joint discussion in the partnership, however, a new term was created: "qualification with a dual orientation towards employment and higher education", with the abbreviated form **DUAL QUALIFICATION** (not to be mixed up with the "dual" system of vocational education and training in Germany!). This concentrates attention on the function rather than on the structure of the qualification, while the issue of integration is examined in the analysis.

The project focuses on an in-depth analysis of a selection of recent schemes of dual qualification which have been implemented in seven countries of the EU and EFTA (Austria, France, Germany, England, the Netherlands, Norway and Sweden). It includes three major aspects of investigation:

- the functioning of dual qualifications in the context of the education system and the social and economic framework of the countries;
- the educational issues implied in the schemes of dual qualification, particularly in relation to the learning process, the validation of competencies and individual guidance;
- the transfer of the qualitative innovation achieved in these schemes to mainstream vocational education and across national systems.

The project is designed so as to provide descriptive and analytical knowledge for understanding the different as well as the shared features of dual qualifications; to present essential characteristics of these schemes as scene-setting for future educational policies; and to offer action-oriented knowledge that will foster the process of transferring experience acquired in these schemes. A close dialogue with policy makers and actors and collaboration with LEONARDO pilot projects will be essential in this respect. The products of the partnership work will include

- a survey of the essential qualitative aspects of innovation achieved in the national schemes of dual qualification;
- a detailed presentation of the features of dual qualification which can be transferred between national systems and which are particularly important for future vocational policies;
- recommendations for promoting dual qualifications in transnational pilot projects under LEONARDO.

## 2.2 OBJECTIVES OF THE COMPARATIVE INVESTIGATION

Schemes of dual qualification are suitable for highlighting fundamental issues of education such as the links between theoretical and practical knowledge; the validation of "working-life" knowledge/experience and key/core competencies; and the pathways for individuals with implications for vocational guidance.

The schemes have to be analysed in the broad context of the overall change in qualification requirements. Against the background of technological advance and diversified patterns of work organisation, there is a growing need for qualified manpower capable of functional flexibility, of acting effectively in complex situations, and of taking individual responsibility. The implications for the acquisition of qualifications are far-reaching, as is indicated by the following trends:

- Starting out from changes in the work process, the concept of qualification has been modified as well. In vocational education and training, the focus is now more on broader competence (rather than the acquisition of specific skills); and action-orientated skills are gaining in importance in contrast with the hitherto dominant knowledge-oriented skills. This reassessment of the value of vocational qualification provides a new impetus for considering it as being equivalent - although different in character - to general education. This approach also has a stimulating effect on the broadening of access to higher education for people with vocational qualifications.
- Connected with this new attitude towards qualifications is the greater attention being paid to the individual. This arises out of an increasing emphasis placed on individual responsibility in the workplace, along with a general need for individual adaptation to changes in work and society. The role of the individual is reflected in new procedures for assessing educational attainments, especially at the point of entering professional careers or of access to higher education. Particularly important forms are qualitative methods of assessment, including the actual evaluation of vocational experience (as against just its formal recognition), and courses which are geared to the needs of individuals, with their specific abilities and experience.
- Responding to the interrelation between education and the world of work, that is, to the pattern of alternating phases of learning and working, education structures are being made more flexible - including the establishment of modular courses and systems of accreditation. This provides a framework for acquiring and accumulating various types

of qualification, both as part of the process of gaining access to higher education and for progression in employment.

Requirements such as these are reflected in a variety of national policies, generally favouring courses which combine broadly-based vocational training with general education and include the development of core/transferable skills. At the same time, the growing aspiration of young people to enter higher education has to be taken into account. Such trends constitute the specific framework for schemes of dual qualification.

This project, therefore, sets out to investigate, in the first phase,

- the national frameworks of economic, social and educational change in which the schemes operate, including the varying competitive positions within the EU;
- the major features of the schemes in the context of the national systems of education, in particular with regard to the balance between extending access to higher education and strengthening the vocational education sector;
- the educational concepts underlying the schemes such as the relation between theoretical/knowledge-based learning, key/core/transversal skills and experiential/work-based learning;
- the organisational implications of integrating general and vocational education in relation to the need for cooperation between traditionally contrasting administrative and financial structures;
- the evidence of success of the schemes in terms of participation and satisfaction in the schemes themselves and in terms of their impact on mainstream vocational education.

The schemes under investigation are characterised not only by their different national contexts; they also reflect a change in the approach to combining general and vocational elements of education. Earlier attempts to bridge this gap have centred mainly on the part played by general or full-time technical education as the foundation. They have tended to add subjects or components of general education to the vocational curriculum, with only a partial degree of integration being envisaged or achieved.

More recent schemes, in contrast, have started out from the new qualities developed in vocational training with the aim of meeting the requirements of modern technology and work organisation. They are closely linked with the application of concepts of "action-orientated learning" or "transferable skills",. and they potentially develop the type of qualities appropriate for taking up advanced studies. At the same time, they provide a challenge to the traditional strongholds of general education, particularly at upper secondary schools level, which also require a broader concept of integrated learning.

These basic issues of the interrelation and equivalence of general and vocational education have been investigated, also taking account of European trends, in a recent set of expert evaluations carried out on behalf of the Ministry of Education and Science in Germany[2]. While research on these issues has been carried out in other countries as well, there is a lack of transnational comparative studies which focus on integrated or double qualifications[3]. An initial assessment of various schemes prepared by WIFO[4] in cooperation with European partners served as a first step in the intended analysis. Further stimulus resulted from a workshop held in1995 on a German pilot project in which basic questions of the relation between general and vocational education were analysed and put in a European perspective[5].

The schemes selected for this project have, for the first phase of investigation, been grouped according to broadly similar frameworks of qualification and administration in the national education systems concerned:

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[2] Bundesministerium für Bildung und Wissenschaft (Hrsg.): Gleichwertigkeit beruflicher und allgemeiner Bildung. Dokumentation der 2. BMBW-Fachtagung am 29. September 1993 in Dortmund. Bonn 1993.

Manning, Sabine: Darstellung und Analyse von Erfahrungen europäischer Staaten zur Gleichwertigkeit allgemeiner und beruflicher Bildung anhand praktizierter Regelungen und Bestimmungen. Gutachten für das BMBW (Förderkennzeichen K 32.40.00)/ Wissenschaftsforum Bildung und Gesellschaft e.V. (Hrsg.). Berlin, Dezember 1992.

[3] Vgl. Training and Education, Convergence between. In: Torsten Husén; T. Neville Postlethwaite (Eds.): The International Encyclopedia of Education. Second Edition. Volume 11. Pergamon 1994, pp. 6412-6416.

[4] Manning, Sabine (Hrsg.): Gleichwertigkeit allgemeiner und beruflicher Bildung - 5 Länderstudien. Equality of General and Vocational Education - 5 Country Studies. Wissenschaftsforum Bildung und Gesellschaft e. V. Berlin, 1993.

[5] Bremer, Rainer (Hrsg.): Doppelqualifikation und Integration beruflicher und allgemeiner Bildung/ Bundesinstitut für Berufsbildung (Hrsg.). Bielefeld: Bertelsmann 1996.

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1. Schemes related to unified systems of general and vocational qualification, which fall under a central educational legislation

- the new vocational programmes or streams at upper secondary level in **Sweden** and **Norway**, which lead to a vocational qualification and a general entitlement for access to higher education;
- the vocational baccalauréat (Bac Pro) in **France**, which provides alternative routes into employment and advanced studies;

2. Schemes operating in a more diversified system of courses and institutions under various educational and professional bodies

- the modular courses leading to the General National Vocational Qualification (GNVQ) at Advanced Level in **England**, which offer a pathway with a dual orientation;
- the senior secondary vocational courses (MBO) in the **Netherlands**, which qualify for skilled work as well as higher vocational education (HBO) in the same field;

3. Schemes based on the dual system of vocational training and qualifying for the vocational strand of higher education

- pilot projects in **Germany** (Bavaria/Brandenburg) offering a complete vocational training for skilled work and the entrance qualification for advanced technical colleges (Fachhochschule);
- part-time vocational courses for skilled workers at the private technical academies (Fachakademien) in **Austria**, which lead to an advanced technical qualification also entitling for studies in a related field.

The analysis of the schemes is intended to provide answers to the following questions:

- What are the determining factors for developing schemes of dual qualification?
- What aspects of the contents and didactics of these schemes are essential for raising the quality of vocational education?
- What have the schemes achieved in practice? What problems have they encountered? What are the factors contributing to their success?

In the second phase of the project (1997), a more detailed examination of dual qualifications is intended to focus on three overriding issues: The character of the learning process, the validation of relevant competencies and the pattern of individual pathways. The evidence of this analysis will enable further conclusions to be drawn on the internal working of the schemes. In particular, the investigation is expected to reveal the potential of dual qualifications for enhancing the quality of both vocational and general education.

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At the same time, the analysis will show the particular problems turning up in the actual process of running the schemes.

Project work in the second phase will involve teachers, trainers and students participating in the schemes and also include a dialogue with educational policy makers, representatives of the social partners, professional and academic bodies.

## 2.3 METHODOLOGY AND STRUCTURE OF THE COMPARATIVE INVESTIGATION

In the first phase, the schemes of dual qualification have been analysed as national case studies (see appendix A) in a comparative perspective. The analysis is guided by a detailed set of research questions worked out jointly by the partnership on the basis of the main objectives of the investigation:

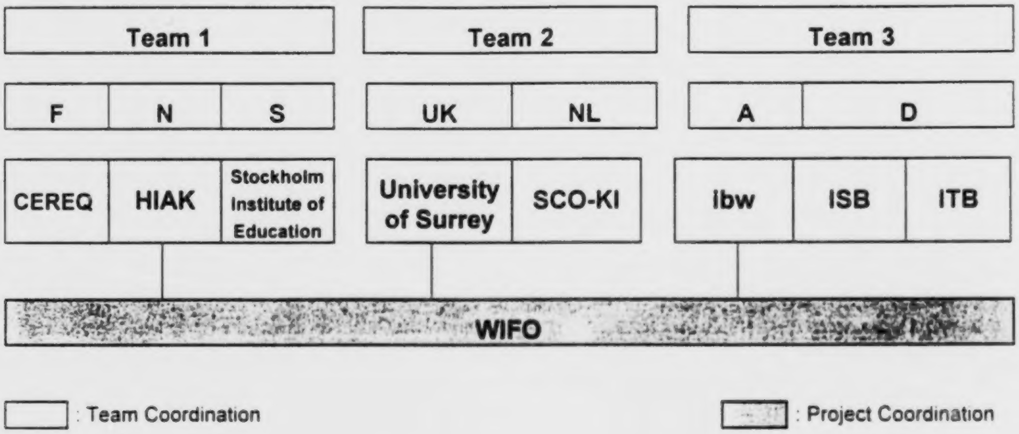
(1) the national framework of economic, social and educational change;
(2) the major features of the scheme;
(3) the educational concepts underlying the scheme;
(4) the organisational implications of the scheme;
(5) the effect of the scheme.

The analytical work of this phase has been mainly based on available documents, information material and studies related to the schemes, personal involvement in the monitoring and evaluation of pilot projects and reforms, observation of examples of the scheme and direct contact with policy makers and actors involved.

The major outcome of the national case studies is summarised in the chapters 3 to 9 below. In an overview (chapter 10) the schemes are analysed according to various criteria in order to show relations, similarities and differences which are important for carrying out a detailed investigation and assessment of dual qualifications.

The comparative approach has been facilitated by grouping the national schemes and by forming teams of partners accordingly:

**Figure 1** **The INTEQUAL partnership**



The results of comparing characteristics of dual qualifications in the countries of each team are presented in the chapters 11 to 13. In a further step, the central question of integrating general and vocational education within the schemes is taken up in a comparative analysis (chapter 14). Finally, a tentative assessment of major features of the schemes of dual qualification is presented and conclusions are drawn respecting the practical implications and transfer of experience across countries (chapter 15).

## Chapter 3

# AUSTRIA: THE WIFI ACADEMIES

**Monika Thum-Kraft & Edith Jonke-Hauptmann, ibw, Vienna**

WIFI Academies were initiated for the purpose of special and general further education and are therefore focused on people who have successfully completed the dual system of initial vocational training, or have obtained certificates at commercial schools or have acquired substancial work experience.

Since 1991 courses have been offered at WIFI Academies all over Austria. The Institutes of Economic Promotion (WIFI) which provide them are institutions for vocational adult education of the Chambers of Commerce. The subjects cover the industrial-technical and commercial fields. After six terms of tuition, a diploma under the title of Fachtechniker (graduate of technical college) or Fachwirt (graduate of business college) may be obtained.

### National framework

The Austrian Educational System is characterised by a variety of possibilities offered particularly at post-compulsory level. It consists of the following areas: pre-school education, school-based education (general as well as vocational), apprenticeship training, courses at the Fachhochschule (i.e. non-university institutions in higher education), university studies and vocational adult education. Included are vocational schools at upper secondary level (Berufsbildende Höhere Schule - BHS), which prepare their students for direct entry into skilled work and, at the same time, for university study in a branch-related field.

In Austria vocational adult education takes place in public and private institutions of further education, at company sites, schools, and universities. Within this spectrum of adult education, WIFI Academies represent a step initiated by industry in the direction of further vocational education and career-related upgrading of skilled workers. The dual qualification (continued vocational education and specialised access to Fachhochschulen) increases the vertical mobility within the system of education and reduces the gap between vocational and general education. Vocational education has a traditionally high rating in Austria; approximately 40 % of the population have completed vocational education in the dual system.

## Major features

No strictly regulated requirements have to be met to gain access to WIFI Academies. A wide spectrum of access is characteristic; in principle main requirements are the completion of compulsory schooling and occupational practice. The ideal preparation is a completed apprenticeship training or an equivalent level of schooling. Consultations and orientation tests prepare the ground for a decision about the participation in a course.

In the autumn of 1991, 23 WIFI Academy courses were started. Three years later, by the spring of 1994, there were already 67 courses throughout Austria. By the spring of 1995, the number had increased to 83, and for 1996 88 courses were planned. The total picture shows a continuous rise in the number of courses. While only 40 % of the courses were of commercial character to begin with, there is now (1995/96) a balance of commercial and technical courses. Every year about 600 students take up their studies.

A WIFI Academy course comprises six terms of part-time study alongside skilled work. It includes, according to the subject field, between 1200 and 1800 teaching units. Intermediate qualifications (with exams and certificates) may be obtained at certain points.

A degree from a WIFI Academy serves as preparation for the instructor's examination, which is an essential prerequisite for the training of apprentices and also represents a special module of further education for businessmen and managers. In addition the WIFI Academy is rated as a preparation for a university admission examination, four out of five examinations being taken at the WIFI, one at the university or Fachhochschule respectively.

After a leaving examination held before a board, the WIFI issues a diploma which is valid in the economic sphere although it is not recognised as an official certificate, since the WIFI Academy curriculum is not subject to the School Organisation Act.

## Educational concepts

All the WIFI Academies have a dual orientation: firstly the supply of technical knowledge enabling the student to satisfy vocational needs, secondly the advancement of general knowledge.

Generally speaking, all courses at WIFI Academies are divided into four sections according to contents: vocational qualification, fundamentals of management, personal education, and general subjects.

Besides traditional seminars, the WIFI Academies try to activate the students, for instance in laboratory work, teamwork and projects. Due to the curricular layout, there are only limited opportunities for students to organise their studies independently, e.g. by interrupting their course after an intermediate qualification and then continuing the course later.

The promotion of key qualifications results from the organisation of the WIFI Academies. The participants must possess a high degree of flexibility and be prepared to study hard for all career-related evening and weekend programmes. Achieving success after six terms of continuous training serves as a test of staying power and ability to learn. The ability to communicate and work in teams is not only achieved in theoretical instruction but practised in all sections of the course by means of discussion, teamwork, and project work.

### Organisational implications

The concept of the WIFI Academies has been developed on a completely new and independent basis, and cannot therefore be regarded as an addition or as an extension to the existing educational facilities. However, links have been established between the WIFI Academies and other institutions in order to provide educational pathways. For instance, general arrangements operate between WIFI Academies and institutions of higher education for the provision of university-access qualifications.

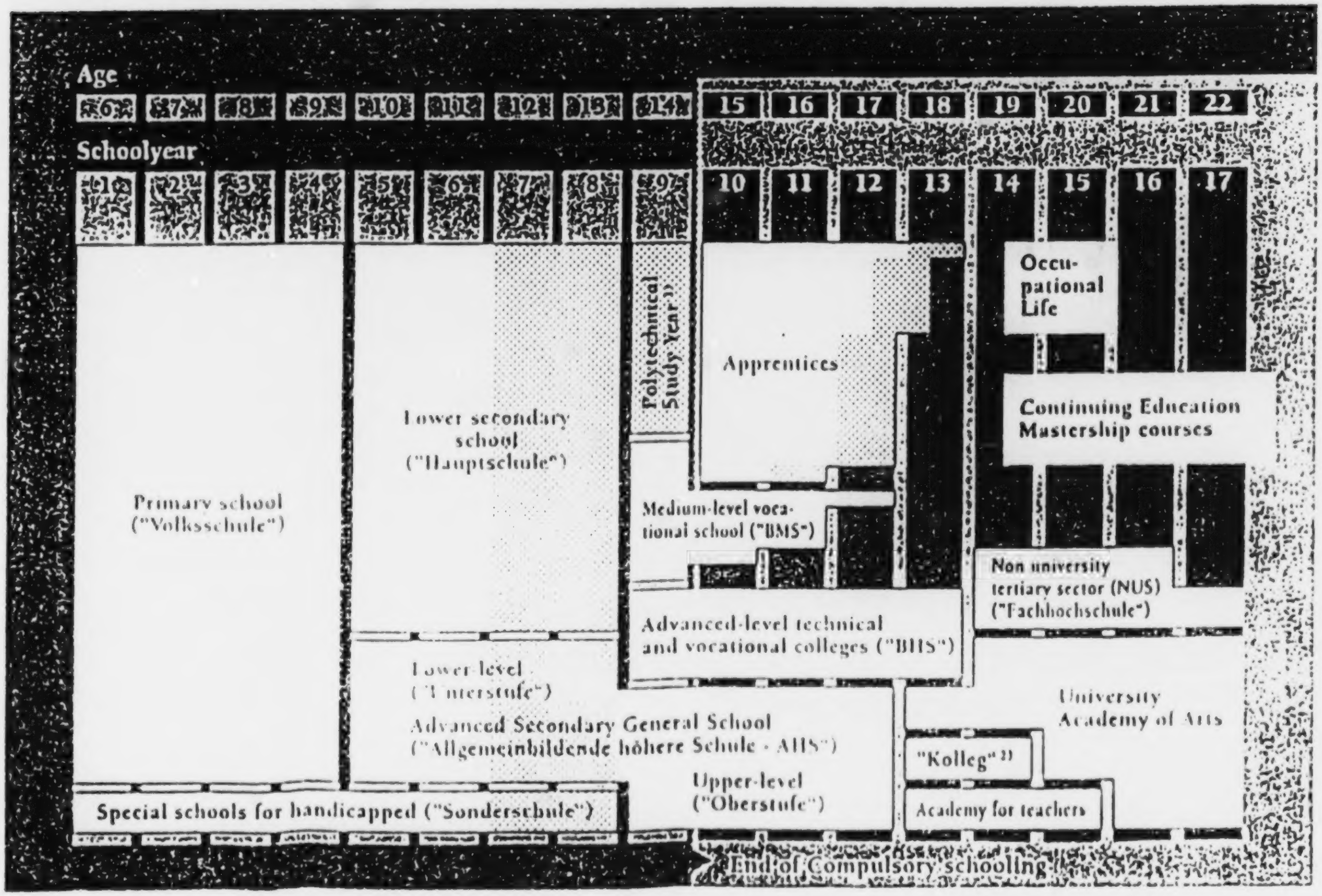
### Effects

Immediately after completing the WIFI Academy courses more than half the students assessed the practical increase in their knowledge as extremely high. More than 70 % emphasised personal-development qualifications such as the capacity for teamwork, the ability to achieve independent solutions of technical problems, communication and understanding as well as learning in general. Following on these, they listed vocational knowledge, general education, and the acquisition of precision in self-expression.

For 50 % of the participants, acquiring the university-entry qualification was an important reason for attending the courses.

The certificate of a WIFI Academy will play an important role in the future, as it not only gives recipients a specialised qualification but also helps in the development of a committed personality.

Figure 2 The Austrian education system


Age
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Schoolyear
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Primary school ("Volksschule")
Lower secondary school ("Hauptschule")
Polytechnical Study Year 1)
Apprentices
Occupational Life
Continuing Education Mastership courses
Medium-level vocational school ("BMS")
Non university tertiary sector (NUS) ("Fachhochschule")
Advanced-level technical and vocational colleges ("BHS")
Lower level ("Unterstufe")
Advanced Secondary General School ("Allgemeinbildende höhere Schule - AHS")
Upper-level ("Oberstufe")
University Academy of Arts
"Kolleg" 2)
Academy for teachers
Special schools for handicapped ("Sonderschule")
End of Compulsory schooling

1) "Polytechnischer Lehrgang"
2) Tertiary Technical and Vocational college

▨ Focuses in Austrian educational counselling and careers information

Source: Thum-Kraft, Monika, Jonke-Hauptmann, Edith: WIFI-Academies. Wien: ibw, 1996, p. 4

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## Chapter 4

# ENGLAND: GNVQ

**Alan Brown**

### National framework

The current English framework of post-compulsory and pre-higher education qualifications comprises three major pathways. The traditional academic A level route was established in 1951. The expressly vocational pathway, leading to National Vocational Qualifications (NVQs), was introduced in 1987. The third pathway, involving programmes based on General National Vocational Qualifications (GNVQs), was introduced in 1992 and is intended to straddle academic and vocational traditions.

GNVQ was specifically intended to provide the skills, knowledge and understanding of a vocational area so as to give opportunities for progression into employment (and NVQs) or further learning. It is available at three levels (foundation, intermediate and advanced). The Advanced GNVQ is designed for entrance into higher education or employment (and NVQs), and so is a qualification with a vocational emphasis but a dual prospective orientation. The particular "problem" GNVQ was designed to meet was the low participation rate in education through to age 18, compared to all major economic competitors.

The overall aim of reforms in this area was to create a coherent national qualifications framework with three differentiated pathways. The specific objectives for GNVQs (the "middle track") were set out in the 1991 White Paper "Education and training for the twenty-first century": they should offer a broad preparation for employment; be an accepted route to higher education; be of equal standing with academic qualifications at the same level; be clearly related to NVQs; and be suitable for full-time students in colleges and schools (DES/ED 1991).

### Major features and educational concepts

The major target group for full-time Advanced GNVQ programmes are those with four or more GCSE passes at grades A* to C. However, as the overwhelming majority of those with five or more GCSE passes at grades A* to C opt for A level provision, in many centres stated entry requirements are not always met in practice. While most entrants to

Advanced GNVQ programmes come from GCSE programmes at age 16, some progress via one year Intermediate GNVQ programmes.

The Advanced GNVQ is a unitised programme, which usually lasts two years. They are available in fifteen vocational areas: art and design; business; health and social care; leisure and tourism; manufacturing; construction and the built environment; hospitality and catering; science; engineering; information technology; media/communication and production; management studies; retail and distributive services; land and environment; performing arts and entertainment industries. The subjects have been introduced over a five year period, with the first five subjects available on a pilot basis from 1992-93, and the final two subjects being piloted in 1996-97. Therefore, it will be 1997-98 before all GNVQ programmes are available to all centres.

Each Advanced GNVQ comprises eight mandatory vocational units; four optional units and three mandatory core skills units at level 3. Up to six additional units (or additional qualifications) can be taken if desired, because the basic GNVQ provision is expected to be two thirds of a 3 A level programme. The mandatory core skills cover communication, application of number and information technology. GNVQ units are described in terms of outcomes, and students are assessed against criteria specified by the National Council for Vocational Qualifications (NCVQ). The units are broken down into elements, typically 3-5 per unit. Each element lists the performance criteria that students need to achieve. Further detail is given in accompanying range statements, specifying the range of contexts in which performance should be demonstrated.

Performance against the criteria is judged by means of teacher assessment of a portfolio of evidence produced by the student. Besides the performance criteria and range statement, teachers are also expected to refer to evidence indicators, published by NCVQ, showing the quantity and type of evidence required. In addition to teacher assessment, students have to pass multiple-choice knowledge tests for most of the mandatory units. These tests are externally set and marked.

In the teaching approach there was often an adaptation of previous provision for vocational courses in colleges of further education. However, for many schools the curriculum design was radically different from their mainstream provision, although some schools may have had some experience in this area through experience of previous pre-vocational programmes. A variety of learning styles are used on GNVQ programmes, with students often undertaking assignments, which require research and information-handling skills. Indeed the emphasis upon active learning was seen as one of GNVQ's most positive features.

GNVQ assessment processes are complex and demanding. If a student passes all the external tests (typically on seven of the eight mandatory units), reaches level three in the three mandatory core skills units, and demonstrates coverage of each performance criterion for each element in each of the 12 mandatory and optional units, then the qualification is deemed to have been gained. There is, however, the opportunity for further grading resulting in the award of a merit or distinction grade based on an assessment of the quality of the overall body of work presented in the portfolio. The work is reviewed to see if there is evidence that the eight grading criteria at Advanced level have been met, and these criteria are grouped into three "process" themes (planning, information handling, evaluation) and a "quality of outcomes" theme. Students have to demonstrate that they have successfully met these criteria in at least one third of their portfolio evidence.

Overall, Advanced GNVQ programmes in practice are generally focused upon facilitating entry into higher education, while also acting as a broad general preparation for employment. Hence GNVQ could be viewed as having a pre-vocational rather than a vocational emphasis.

Core skills form an essential component of GNVQ. The three mandatory core skills units (communication; information technology and application of number) must be achieved at level three in order to qualify for the award of an Advanced GNVQ. The assessment of these core skills was often problematic in practice, while the commitment to the development of other core skills, such as problem-solving and learning to learn, was under-emphasised.

## Organisational implications

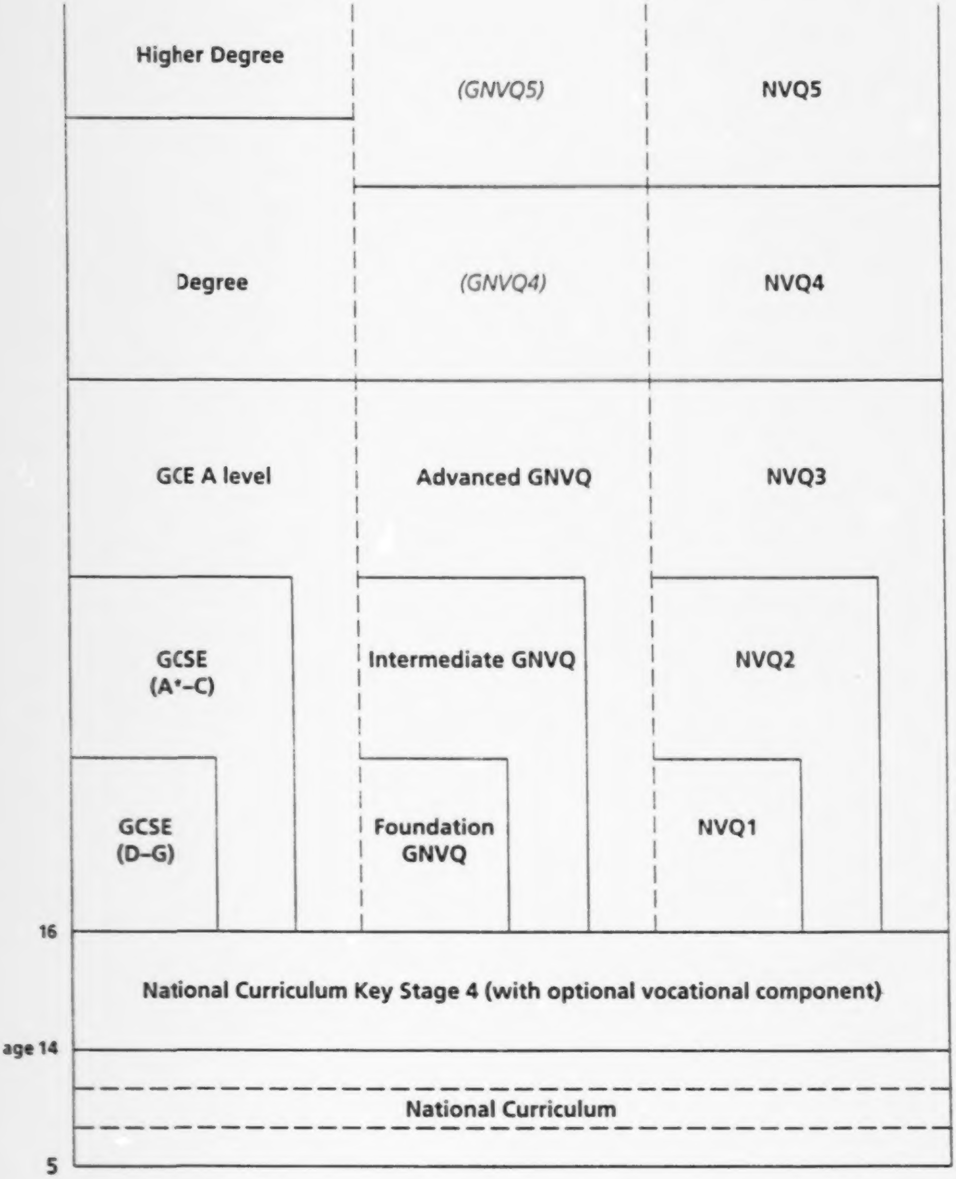
The most problematic aspect of GNVQ in practice was related to assessment, and these problems in turn could be linked to major deficiencies in the GNVQ model of teaching, learning and assessment. The unit tests were too narrow in focus, and used impoverished models of cognitive development and knowledge acquisition. The assessment processes under-emphasised the importance of integration and the development of a substantive knowledge base. There were fundamental flaws in the whole orientation of assessment based upon highly detailed criteria of performance.

## Effects

There was a deluge of criticism from practitioners about the problems caused by highly detailed performance criteria and test specifications. After several attempts at ad hoc reform, and a major independent review, NCVQ announced in autumn 1996 that they intended to develop a new GNVQ model, new GNVQ unit structures, a new approach to outlining the components of GNVQ units, revised (clearer) assessment criteria, a new style of external testing, a revised recording system and guidance on effective teaching and delivery strategies that teachers could use.

Overall then, the desire in 1991 to create a new "middle pathway" was well-founded. The particular embodiment of that desire, the GNVQ, however, was seriously compromised in two respects. Its assessment model was fundamentally flawed: atomistic assessment regimes have been shown to fail once again. Secondly, the timescale for implementation was unrealistic: a situation which meant that it was impossible to "bed down" the new qualification based on mature reflection upon experience and practice. Rather everyone was continually scrambling to get things in place and reacting to events. This in turn has led to almost continual changes, as attempts have been made to improve GNVQ in many respects. The second problem is starting to decrease in significance, as those concerned with GNVQ policy development and implementation gain in experience. Assessment processes too are set to become more manageable, and there now appears to be the will to tackle at least some of the basic design flaws in the GNVQ assessment model.

**Figure 3** The new qualification framework in England



Source: NCVQ (Ed.): GNVQ Briefing. London, June 1995, p. 27.

## Chapter 5

# FRANCE: THE VOCATIONAL BACCALAUREAT

**Henri Eckert & Jean-Louis Kirsch**

### National framework

The vocational baccalauréat in France was created in response to four major concerns:

- Firstly, the modifications in industrial organisation, combined with the technological advances introduced in the early 80s, revealed certain shortcomings in the provision of labour. These shortcomings took the form of a generalised need for employees with a skill level situated between that of the skilled worker and the qualified technician in addition to the need for highly-qualified professionals in the sectors that first adopted these new organisational approaches and new technologies. The educational system offered no programme or degree that meets these new demands in a satisfactory manner;
- Secondly, in the training system, the first vocational qualification (CAP and BEP) offered few possibilities for those achieving them to move on to more advanced programmes, and the value of these qualifications on a strongly depressed job market was clearly losing ground. An early orientation towards vocational training programmes started to become a form of marginalisation for those involved in such programmes. The vocational baccalauréat formed part of a broader drive to recognise technical culture, and this new qualification is aimed primarily at students who already have an initial vocational qualification, in reality at those who have completed the BEP programmes. For the first time, the vocational baccalauréat gave students in vocational programmes access to higher education;
- Thirdly, in addition to meeting the specific needs of qualified labour and the pressing need for regenerated vocational training, the creation of the vocational branch takes account of a broader concern for social equity, which was one of the main priorities of the government at the time. The aim was to raise the training level for young French people, as a whole ensuring that 80% of a given age group would reach baccalauréat level by the year 2000;

- Finally, from a macro-economic point of view, the French wished to catch up with other comparably developed industrial countries in terms of training for the general population, thus improving productive competitiveness. Here we find the determination to reconcile responses to economic and social needs by setting up a new programme that satisfies the growing demand for longer studies, in the interests of both society and the individual.

### Major features and educational concepts

In the move to upgrade the vocational skills among young school leavers, the creation of this new qualification reinforced certain trends that were shaping educational programmes:

- The links between labour, business and the educational community have been strengthened. In France, vocational qualifications are defined by official social bodies that include employer and employee representatives from various industries as well as administrative personnel from the Ministry of Education. The vocational baccalauréat has reinforced this institutional link thanks to the role played by French firms in the training process. For the first time, it was recognised and admitted by all involved that businesses do indeed play an educational role. This represented a major change from earlier French tradition wherein mutual mistrust between the world of education and the economic world seemed to be the rule.
- An analytical approach was developed, based on certain reference values. This approach defined the training goals in terms of the vocational activities that have been targeted for those completing the programmes. Then the types of knowledge needed in the different disciplines to perform these activities were determined. Once again, French tradition was overturned, since educational programmes had previously been defined rather on the basis of a separation of disciplines, reducing practical experience to the specific application of theoretical models. Thus it has been possible to publish relatively straightforward guidelines for the establishment of programme objectives, principles and validation.

In the case of the vocational baccalauréat, the curriculum is grouped into four major domains:

1. science and technology (including mathematics), accounting for 17 to 18 hours of course work per week,
2. expression and awareness (French, foreign language, history, geography, civics), accounting for 7 to 8 hours of course work per week,

3. arts and crafts, accounting for 2 hours of course work per week,

4. physical education, accounting for 3 hours of course work per week.

This approach thus attempts to integrate both academic and vocational subjects, with mathematics, physics and management being considered as vocational subjects.

The list of basic competence types goes well beyond the division into vocational and academic education. Both of these considerations are in fact included in a common project. It must be remembered that professional competence cannot be reduced to the technical considerations alone, a situation in which individuals must call upon their entire personality in dealing with the surrounding world.

Likewise this process has led to the introduction of innovative teaching methods. The most striking aspect is certainly the introduction of an average of sixteen weeks of on-the-job training during the two year programme. These training periods are regarded as an integral part of the programme, they are assessed separately and are taken into account by the jury in the decision whether to award the qualification. This French style "alternated training" has led to various developments in the theory of learning and apprenticeship, notably in recognising specific types of vocational knowledge which are transmitted using unconventional academic .

At the outset, it was quite difficult to predict what impact these developments would have on the relationship between the educational institution and the surrounding environment, or the changes that would occur in the relations between the different social partners involved. To some extent, firms and education relinquished certain types of pre-eminence and agreed to become involved in each other's domain within the framework of a contractual relationship which involved the trainee as one of the partners. For the French educational tradition, this represents a major transformation. The company is recognized in an educational role which the teachers must respect in the formulation of their teaching activities and in the evaluation of their students. It implies close co-ordination with the personnel supervising the student in the company, and thus a considerable change in teaching practices.

The vocational baccalauréat was integrated into a pre-existing context of partnerships. However, this new educational programme stimulated the existing links, in that potential employers are involved not only in the programme design and definition, but also play a direct role in the actual training. This encourages a series of exchanges, from the very highest levels down to the base, both in the educational system and in the world of industry. Evaluations have indicated that these new relations have been received positively, although the fear has been expressed that the increasing student population will ultimately make it impossible to offer all students a satisfactory training in work situation sessions. In practical terms, the vocational baccalauréat programme has revolutionised the accepted rules for teaching:

- The periods of training in the work situation are incompatible with a highly standardised schedule based on the regular planning of weekly activities.
- These training periods require that the student's behaviour should be assessed in a vocational context, and that the commitments made by the host company are indeed respected, meaning that organisers must spend a fair amount of time travelling.
- Traditional relations between the different parties have profoundly changed. The teaching team must work collectively inside a team, companies must be contacted, negotiations conducted and a contract-type commitment established between the teacher, the student and the tutor in the host company.

### Organisational implications

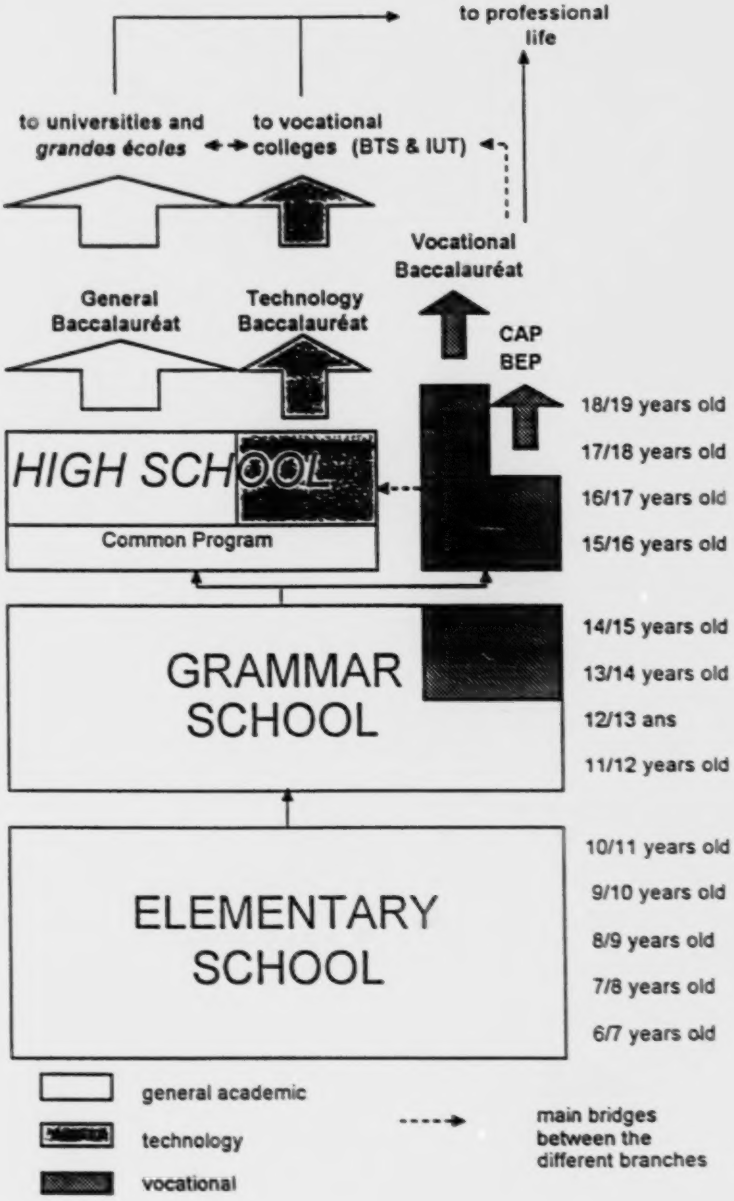
The organisation of the vocational baccalauréat programme requires by its very nature a level of flexibility not found in conventional educational programmes. The professional habits of teachers have been fundamentally altered as a result of the obligations imposed by such an approach. What is more, the background of the students varies considerably as do the companies in which the training sessions are carried out. Lastly, most of the students in these classes are legally adult, i.e. over 18 years old at the start of the programme. This requires the teaching relationship to be based on a principle of shared responsibility and not on teacher authority. All these factors call into question any educational organisation that is based on intangible and regular pedagogical progression. The teaching approach tends toward a personalised relationship based on a mutual contract between the teacher and the student. The aim of this contract is to remedy the weaknesses of each student and to take into account his or her acquired knowledge.

### Effects

From the experience of the vocational baccalauréat programme, three main points can be advanced:

- The first point concerns the search for a means of handling school failure other than orientating students towards vocational programmes. As was pointed out earlier, the vocational baccalauréat can be considered as a new opening for students leaving level-1 or level-2 programmes. On the other hand, students who do not reach or exceed these first levels are heavily stigmatised. Only early treatment of school failure would allow vocational baccalauréat students to enjoy the same reputation as students from other branches.
- The second observation concerns the way in which the transition to the world of work is organised. The dual objective of the vocational baccalauréat cannot be upheld unless it ensures adequate entry into the work force. If this question is left up to the forces of the labour market, we will undoubtedly be heading for disenchantment. It can thus be asked whether the new relationships developed between educational establishments and companies cannot be used to facilitate the professional integration of the students. But this would imply a major transformation of the teaching profession, with the recognition of this new responsibility in the criteria that shape the reputation of individual establishments and teachers.
- Finally, we can ask whether the vocational baccalauréat might not play a more important role in continuing adult education. It seems that the targeted jobs correspond to a number of individuals who already have a certain amount of work experience. In this way, the vocational baccalauréat might reinforce the overall management of human resources and the organisation of employee career plans.

**Figure 4** **The three branches of the French education system**



Source: Eckert, Henri; Kirsch, Jean-Louis: The "vocational baccalauréat" in France. Marseille: Cereq, 1996, p. 9.

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## Chapter 6

# GERMANY: PILOT PROJECTS OF DOUBLE QUALIFICATION

**Rainer Bremer & Werner Kusch**

Two pilot projects are described:

- *„Duale Berufsausbildung und Fachhochschulreife*“ (dual vocational education and access qualification for higher-level studies) in Bavaria;
- *„Schwarze Pumpe*“ (name of a brown coal production firm) in Brandenburg.

Their objective in both cases is to equip trainees within the dual system of vocational training to obtain the necessary certificates and qualifications needed both to complete an initial vocational training (Facharbeiterbrief) and to enter higher-level studies at a Fachhochschule. The two pilot projects differ in their conceptual, methodological as well as time schedule approaches, yet ultimately pursue the very same aim.

### National framework

The pilot projects are conditioned to a considerable extent by the specifically German differentiation drawn between vocational and general education. The route of double qualification offers a vocational certificate and the qualification to study, opportunities which otherwise can only be attained in different traditional educational school types which stand in isolation from each other. These traditional school types continue to operate within the context of the differentiated treatment of vocational and general education - despite the fact that two large-scale all-encompassing reforms of the school system as a whole have attempted to eradicate the problem.

The educational reform in the early 70's succeeded in modifying the upper secondary level (Sekundarstufe II) of the „gymnasiale Oberstufe“. For the first time, the gap between higher general and vocational education was reduced. This „rapprochement“ involved the abolition of the formerly very rigid canon of mandatory subjects at the Gymnasium level and the incorporation of vocational contents into its curriculum. As a result, subject areas such as computer science, social sciences and pedagogy could be taught and incorporated in the Abitur (general university qualification). The privilege of granting qualifications to enter institutions of higher study, however, remained solely within the jurisdiction of the Gymnasium.

Vocational schools to some extent also underwent a change and to a certain degree their status was enhanced. Several Bundesländer conducted pilot projects targeting the integration of vocational and general education, e.g. Nordrhein-Westfalen (the Kollegschule), Berlin (the Oberstufenzentrum) and Hessen (technical assistants' vocational training: Modellschule Obersberg and Odenwald). Slowly but surely (and continually), the importance of the Fachoberschulen (directly related to vocational schools offering qualifications giving access to the Fachhochschule) grew. Out of all this a vocational educational route came into being which led to access to higher level studies. This route, along with the dual qualification and the vocational academies simultaneously introduced in Baden Württemberg, could not in any real sense compete with the Abitur offered by the Gymnasium. Even after the reforms of the 70's the Gymnasium continued to offer the „crème de la crème" road to general university study qualifications. To this day no structural measures in education have been able to change this fact.

The problems discussed above have led to the paradox that young people pursue Gymnasium courses to Abitur not only because they believe it will secure them entry to the university, but also because they believe that they will then have a solid basis with which to [illegible] traineeship (in certain intellectually demanding vocations). Seen from this perspective, it becomes only too apparent that educational measures offering dual qualifications would in many instances indeed make good sense.

## Major features and educational concepts

[illegible] and Brandenburg offer qualifications for higher-level studies at the Fachhochschule and enable students to acquire certificates as power electronics specialists or industrial mechanics. The time frame within which these qualifications can be achieved is of shorter organisational duration than traditionally would be (or is) the case (pilot project duration of 3 to 3 ½ years, while the standard vocational training takes 3 ½ years with an additional Fachoberschule course of 1 to 2 years). Unlike previous modes of dual qualification, both pilot projects noted above are being carried out with the close cooperation and involvement of the training enterprises. This participation offers an educational model, and thus a methodological and didactic strategy which closely aligns higher learning (preparation for the Fachhochschule) with vocational hands-on training. Students learn by doing. Theory and practice go hand in hand.

Both pilot projects must respect the legal regulations and/or existing educational/training requirements (involving a minimum of instructional time that must be spent on covering core subjects and subject matter). Nevertheless, because the cooperation of the pilot project partners allows for training/instruction to take place at only one site of learning (either at the school or enterprise), a time saving mechanism is guaranteed. In this way the reduction of the length of training does not mean that the transmission of general, or for that matter, vocational knowledge or know-how is necessarily reduced. Furthermore, an additional opportunity becomes available. This involves the development of new curricular projects that integrate general and vocational contents and thus also save time. Moreover, such elements of the Fachoberschule which generally - with the exception of the field of technology - are of an apparently theoretical nature, in actual fact fit into the curricula of vocational education very well. This also allies to foreign language instruction.

The Brandenburg pilot project in particular emphasises the methodology of vocational hands-on practice. The curricula consist of complex „Lern- und Arbeitsaufgaben" (learning and work tasks) which demand practical activity and planning as well as the carrying-out of vocational assignments. In this way the student's ability to work independently and responsibly is encouraged and developed. The manufacture of equipment or the installation of components always includes a phase of analytical analysis as well as an evaluation of the steps to be taken (or which have been taken) in fulfilling the objectives of the task. Students work in groups (i.e. teams) and upon completion of the project present their results to the class (the act of presentation at the end is of particular significance for the didactic approach adopted).

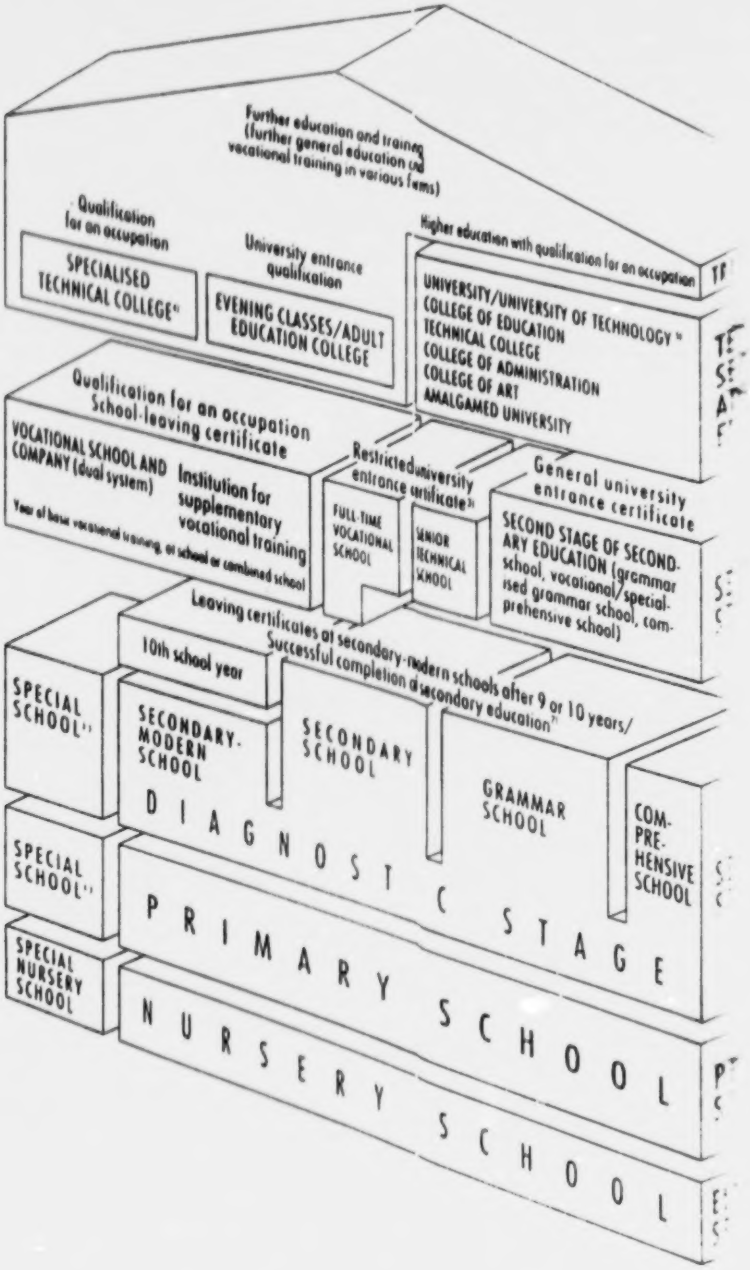
The Bavarian pilot project „Duale Berufsausbildung und Fachhochschulreife" has as its most distinctive feature the paradigm of working with a so-called Leitfach, a major subject that connects various instructional and training materials in such a way that theory, practice and seemingly extraneous subject matter are brought together and in this way made tangible. The pilot project Leitfach is technology/technological mathematics. Insights from the field of the psychology of learning play an important role and function such that students discover knowledge in its natural holistic context. Disseminating knowledge and know-how according to the guiding principle of the Leitfach is aimed at assisting students to achieve higher educational standards and to do so more readily and easily. Furthermore, the intensified interlinking of subject matter makes use of the considerable learning potential that is involved in learning-on-the-job. As a consequence, the Bavarian pilot project has developed in part integrative syllabi with cross-curricular vocational and general educational contents.

### Organisational integration in the educational system

The Brandenburg pilot project has not yet been completed, but this Bundesland - with the formal approval of educational training and examination requirements relating to dual educational qualifications - achieved the necessary preconditions for the introduction of double qualification routes at all upper-level vocational centres (Oberstufenzentren) in Brandenburg. On the basis of this new educational law, the administrative board of education is obliged to officially recognize the application of this new educational route, always assuming that the required conditions exist (for instance that sufficient trainees have applied). Even so, in order to promote the „Schwarze Pumpe" pilot project with its special features and methodology, a transfer process has been initiated. This transfer will be backed by measures at training enterprises and vocational schools (for instance offering continuous training for teachers and trainers, and implementing standard curricula).

The Bavarian pilot project has been directly integrated in the existing vocational (regulated) school system via the vocational school and enterprise training association („Lernortverbund"), which consists of participating vocational schools, Fachoberschulen and training enterprises. The pilot project will initially run until the year 2001.

**Figure 5** The German education system



Source: The Federal Minister of Education and Science (Ed.): Vocational training in the Federal Republic of Germany. Bonn 1992, p. 4f.

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## Chapter 7

## THE NETHERLANDS: MBO

**Trudy Moerkamp & Eva Voncken**

### National framework

The national case study in the Netherlands focuses on MBO schools which offer three and four year vocational courses at senior secondary level. These courses qualify youngsters of 16-20 primarily for employment at middle-management level in four sectors: technology, agriculture, health care & social services and commerce.

The MBO diploma is primarily a vocational qualification. Simultaneously, however, a diploma resulting from long MBO courses allows students to enter higher vocational education (HBO). Whereas the qualified outflow from long MBO courses entering HBO has been increasing since the end of the eighties and is continuing to do so in the nineties (around 30% of the MBO graduates), the transfer from MBO to HBO has only recently become a major topic in national education policy.

At junior level general education has become the major option, while at senior level the vocational stream is favoured above the general one. Participation in senior vocational education, in particular participation in MBO, has increased substantially during the past 15 years. Whereas in 1970 12% of all young people between 16 and 18 participated in MBO, in recent years almost half of this age group is enrolled in MBO.

Over the years MBO has become the most popular route in senior secondary education, not only as a final stage in education but also in offering opportunities to transfer to higher education. In higher education MBO graduates are at no disadvantage compared with graduates from general education, i.e. the HAVO track. Moreover, graduates from MBO courses hold a strong position on the labour market.

### Major features

MBO courses are primarily intended for graduates of MAVO (junior general secondary education) and VBO (pre-vocational education). VBO graduates entering MBO are outnumbered by MAVO graduates. Meanwhile the number of HAVO (senior general secondary education) and VWO students (pre-university education) who continue their education in

MBO is increasing. Although the route from HAVO or VWO is a common route for those who do not have a diploma, this route is chosen more and more by HAVO graduates (now around 25%). However, this route is considered an indirect track and is not stimulated by governmental education policy.

The most significant changes in the qualifications of students entering the various sectors within MBO are:

- technological sector: during the period 1980-1992 the percentage of male students with a MAVO diploma dropped to 37% of the total number of male students entering technical MBO courses; the number of male students with a VBO qualification also dropped slightly (31% in 1992); the number of male students coming from HAVO/VWO increased to 15%.
- social services & health care: the number of female students with a MAVO diploma rose to 44% in 1992; the number of female students with a VBO diploma dropped to 32% in 1992. In 1992 5% of all students came from HAVO/VWO.
- commerce sector: of all students entering, the number with a MAVO diploma dropped to 48% in 1992; the number of students coming from HAVO/VWO increased to 21%.

MBO courses cover occupational fields within four sectors: the technical, agriculture, health care and social services and administration/commercial services/trade. MBO offers relatively broad courses, even more so if compared to apprenticeship courses.

MBO consists of several different courses which vary in duration from two, three to four years. The Dutch INTEQUAL study focuses on the three and four year courses within MBO. The three year programmes are mainly school-based. All courses include short practical periods of training at the workplace varying from once a year (health care) to one short period during the whole course (commerce courses). The three year courses cover occupational fields within commerce and social services & health care.

The four year courses are the equivalent of the three year full-time courses, covering occupational fields within the technical sector, agriculture, health care & social services and commerce. They include a full year of training on the job (either the 3th or 4th year), mostly involving two or three different placements. The technical sector mostly provides a programme of three years in school and one year training on the job. Some four year courses are modular, integrating the various general and vocational subjects and learning targets.

### Educational concepts

MBO has in fact a threefold qualifying function: a labour market qualification, a social qualification and a transfer qualification. Some courses, therefore, offer extra·activities next to their regular programme for students wishing to proceed in HBO. These extra activities consist mainly of additional subject matter in general and theoretical subjects. They are being formalized because of the development of transfer attainment targets. However, all MBO graduates will keep the right to proceed to HBO, a right which applies to students who have not attended a transfer programme. However, students who do attend transfer programmes are expected to have better chances in HBO. In fact, it means that the regular programme leads to a double qualification. Students who attend the regular programme are considered to be acceptably qualified for transfer to higher vocational education. Both vocational and general subjects are considered to be relevant.

Students themselves consider MBO a good preparation for HBO courses. Graduates from MBO seem to be more satisfied on this matter than graduates from general education, although they feel that MBO courses should stress subject matter knowledge to a greater extent (languages, maths, study skills), while putting less emphasis on the practical orientation.

MBO schools consider both vocational and general subjects to be relevant with respect to transfer to HBO, although vocational subjects are regarded the less important.

### Organisational implications

The double qualification function in MBO is divided into two parts:

- the regular programme, consisting of vocational, and social cultural qualifications; this is the "standard" programme, which gives students the formal right to enter HBO;
- the enrichment programme, which consists of qualifications which are directly and specifically aimed at transfer, offering students a better chance of success in HBO.

MBO students have the opportunity to obtain a specific HBO-transfer certificate.

Recently a draft version of the attainment targets for the HBO certificate became available. The HBO certificate consists in the first place of common subjects in all courses. The qualification will include the attainment targets of the Dutch and English languages and "general skills". "General skills" include: working systematically, reflecting on work methods, cooperating with others. According to the Working Group that designed these attainment targets, "general skills" should be related to subjects like mathematics or science.

In the second place the MBO-HBO certificate will contain MBO-HBO domain-related qualifications. Similar to the domains in general education (senior level), four domains have been distinguised: a socio-cultural domain, economics, nature & health, nature & technology.

### Effects

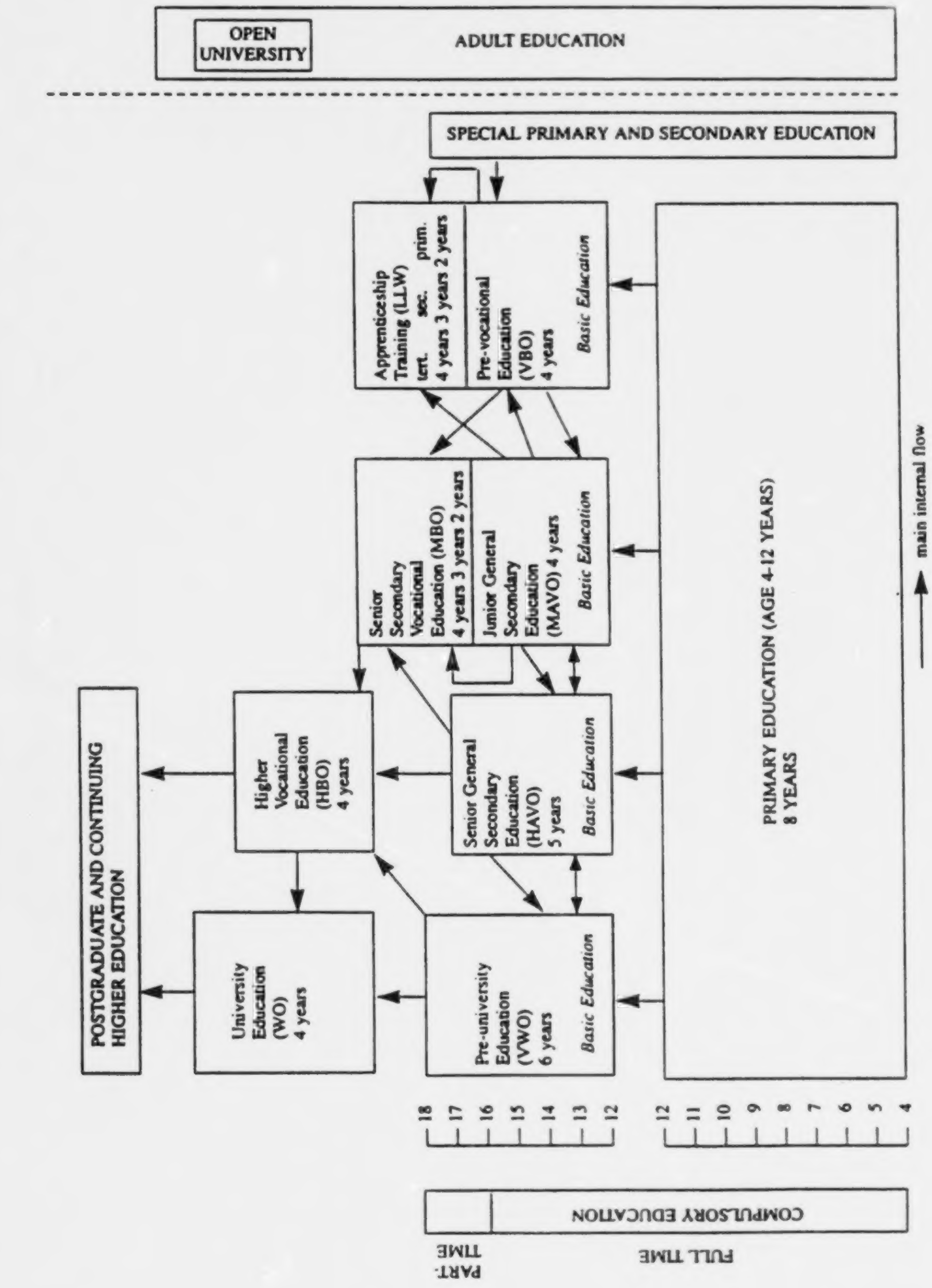
After graduation in MBO 61% of the students leave the education system; 46% find a job, 2% fail to do so and 12% enter the military services. Almost 40% of all MBO graduates proceed with another course of studies, 5% of these being in apprenticeships.

In 1994, 28% of all MBO graduates continued their studies in HBO: 34% of all male graduates and 21% of all female graduates. Over the years, participation in higher education after graduating in MBO has increased. This applies to all groups of students within MBO (not only the HAVO graduates, but the MAVO and VBO graduates as well). This figure is a little higher in the technical and the administration sector, in the health care & social services a little lower, whereas in the agricultural sector only 12% of the MBO graduates proceed to HBO.

MBO students who continue their studies in HBO tend to go on with a course in the same sector (about 87% of all MBO students do so, 13% changing fields). For example: the MBO sector health care/social services has four corresponding HBO fields: health care, social work, arts and teacher training. School leavers from the commerce sector seem to make a change to a different HBO sector more often.

In general, the success rate of MBO graduates transferring to HBO is more or less the same as in HAVO (senior general secondary education). However, differences exist between sectors: MBO students from long technical courses have a higher success rate than MBO students from economic/administrative services or social services. Moreover, MBO students from the technical sector show better results in the HBO technical courses compared with HAVO students.

Figure 6 The Dutch education system


OPEN UNIVERSITY
ADULT EDUCATION
SPECIAL PRIMARY AND SECONDARY EDUCATION
POSTGRADUATE AND CONTINUING HIGHER EDUCATION
University Education (WO) 4 years
Higher Vocational Education (HBO) 4 years
Senior Secondary Vocational Education (MBO) 4 years 3 years 2 years
Apprenticeship Training (LLW) tert. sec. prim. 4 years 3 years 2 years
Pre-university Education (VWO) 6 years
Basic Education
Senior General Secondary Education (HAVO) 5 years
Basic Education
Junior General Secondary Education (MAVO) 4 years
Basic Education
Pre-vocational Education (VBO) 4 years
Basic Education
PRIMARY EDUCATION (AGE 4-12 YEARS) 8 YEARS
18
17
16
15
14
13
12
12
11
10
9
8
7
6
5
4
PART-TIME
FULL TIME
COMPULSORY EDUCATION
main internal flow

Source: OECD (Ed.): Vocational training in the Netherlands: reform and innovation. Paris 1994, p. 8.

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## Chapter 8

# NORWAY: UPPER SECONDARY EDUCATION

### Tor Bergli, Egil Frøyland & Lillian Larsen

## National framework

The Reform 94 represents an ambitious endeavour to strengthen the integration of vocational and general education within a comprehensive, upper secondary school system and to revitalise the apprenticeship system. The reform takes account of national changes in the labour market and the increasing appreciation of education as a strategic means of improving international competitiveness.

## Major features

The reform has three distinctive dimensions:

- the introduction of a statutory right for three years of education for all;
- restructuring vocational education;
- advancing curriculum change.

The statutory right to three years of additional education on top of nine (from 1997: ten) years of compulsory schooling is legislated for in a "youth guarantee" of work or education for all. The applicants are entitled to attend one of their first three priority choices. For the 16-19 year olds who are not in education or employment, an administrative follow-up service has been established. The capacity of upper secondary schools is designed to be large enough to ensure that adults also have an opportunity to obtain upper secondary education.

There are small alterations in the three year general streams leading to matriculation examinations. The main model for vocational education will be two years in school and two years in an apprenticeship. The number of foundation courses has been sharply reduced from more than 100 to 13.106 and 210 vocational specialisations will be offered in the second and third years of training respectively.

Matriculation requirements are defined as a minimum level of achievement in specific subjects. The general subjects in the vocational streams include Norwegian, English, civics, modern history, mathematics and natural science. They are accepted as building blocks for matriculation. In the vocational curricula the students are informed about which subjects need to be supplemented for matriculation requirements.

With the active support of labour organisations, Reform 94 heralds a new era for apprenticeship training. The new reform has as a premise a vast expansion of apprenticeship places and a qualitative upgrading of the system. In 1995 the number of journeyman/trade tests was 15.448 including 7.088 tests taken up by adults who had not participated in ordinary vocational education. 85,5% passed the tests.

The government will subsidise the enterprise training equivalent to the student cost of school-based training. Half the time spent on the two years apprenticeship is reckoned as "training", the other half as production, which the trainees will be paid for. The remuneration of apprentices will on average be half the starting salary of a skilled worker for the "production year". From an economic point of view, vocational training may appear attractive - especially in view of the number of unemployed university graduates.

### Educational concepts

General and vocational education is rooted in traditions with distinctive learning cultures. The differences must be recognised in the curriculum bridge building process. Key concepts must be reconsidered and redefined.

The curriculum reform has been guided by a manifesto designated the "core curriculum". This document outlines the basic principles respecting contents and methods in education and training at all levels except university studies. The ultimate aim of education is described as the development of an "integrated human being" who accommodates qualities of a spiritual, creative, working, liberally-educated, social and environmentally aware human being.

"Activity competence" (handlingskompetanse) was launched as a key concept in the Commission Report which the Reform 94 is based on. This concept was subdivided into subject knowledge, ability to learn, social skills and method competence. Although "activity competence" was not adopted in the curriculum development, some elements may be interpreted in this direction: the emphasis on "self-reliant learning", mandatory project work, the broad conception of knowledge, subjects defined by learning objectives rather than by subject matter etc. The conceptual framework of "activity competence" may prove to be a productive point of departure for integrating general and vocational education. The focus is neither on general subject knowledge nor on specialised vocational skills.

For every subject, specific syllabus and training support material has been prepared in accordance with several general principles:

- a wide concept of knowledge stressing a diversity of competencies;
- coherent syllabuses, i.e. the syllabuses being applicable regardless of the training site;
- the modularisation of content in order to accommodate special needs;
- internationalisation, environment and computer technology as constituent parts of all syllabuses.

### Organisational implications

A series of measures has been adopted in order to support curriculum change. A Pupil's Guide has been prepared to help students participate actively in the preparation, implementation and evaluation of their courses with the aim of fostering self-reliant learning. A comprehensive in-service training programme has been implemented and a special evaluation programme monitors various aspects of the reform.

### Effects

Since the introduction of the Reform 94, the recruitment to vocational streams has increased. The gender bias, however, has not changed very much.

The recruitment to vocational education may be affected by the difficulties in providing a sufficient number of apprenticeship places. Approximately 6.000 applicants did not obtain apprenticeship places in 1996. The county educational authorities must offer these students an Advance Course II in school. There is a widespread concern about the quality and attractiveness of this option, which may have repercussions on the recruitment to the vocational streams. In 1996 more than 2.000 students from vocational streams have opted for the Advanced Course II, General Subjects Supplement in order to fulfil the matriculation requirements.

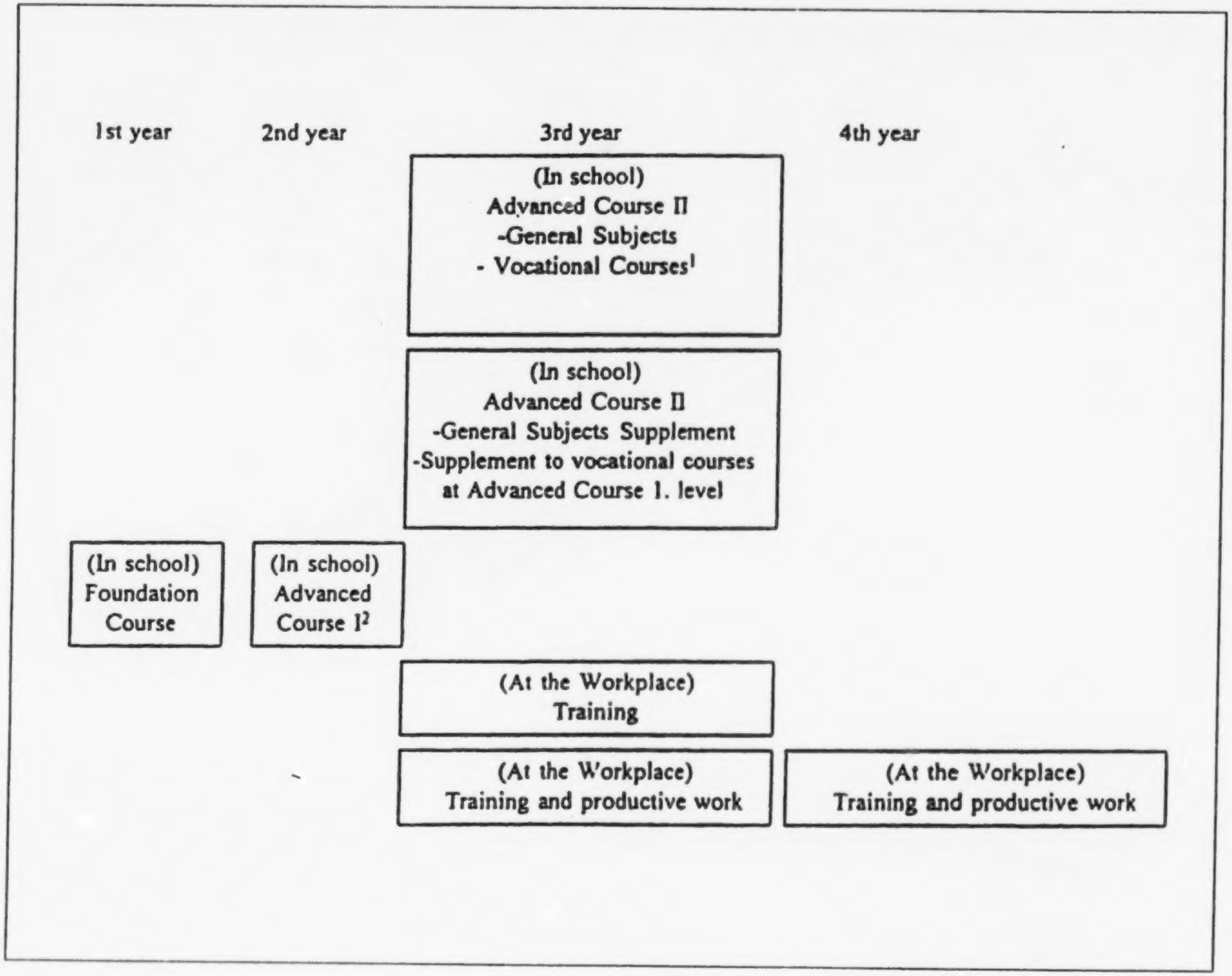
The impact of the Reform 94 on the learning environment and learning processes is difficult to assess. The national case study has tried to identify various elements which influence educational practice. Of particular interest are the national curriculum and assessment standards on the one hand, and on the other the professional role of the managers and teachers - and the understanding and practice of students' "self-reliant learning".

Timetables, subject syllabuses and subject teachers are dominant frame factors in Norwegian school organisations. The expansion of general subjects may reinforce the academic traditions. The inclusion of all young people in upper secondary education may force schools to reconsider established teaching practices in order to cope with the wide range and differentiation of learning needs. More collaboration between vocational and general subject teachers is required. The potential of school libraries - including access to IT networks - in fostering students' self-reliant learning is considerable. The strengthening of the relationships between schools and enterprises may open new and untraditional avenues for learning. Of particular relevance and importance is the introduction of new systems for assessment as portfolios of evidence. These have received support from politicians and the public at large, although they met with opposition from teacher unions.

The reform of upper secondary education has implications for future teacher training. A Royal Commission has submitted a report recommending far-reaching changes which will diminish the differences in training of teachers of vocational and general subjects.

The Reform 94 constitutes a decisive step towards the strengthening of vocational education within a comprehensive system and the fostering of parity of esteem between vocational and general education. To what extent the reform will blur the distinction between general and vocational education remains to be seen.

**Figure 7** The new model of upper secondary education in Norway



Source: Frøyland, Egil; Bergli, Tor; Larsen, Lillian: The way forward to qualifications for employment and higher education for all. Oslo: HIAK, 1996, p. 2.

## Chapter 9

# SWEDEN: UPPER SECONDARY EDUCATION

**Göran Årman, Robert Höghielm & Owe Liljefelt**

### National framework

In the view of the minister as expressed in the Government Bill (1990/91) "Growing with Knowledge", the educational system must be organised to a greater extent in such a way that it can meet both the individual's and society's demand for lifelong learning. In this context the upper secondary school takes on a strategic position. It must be a school where every individual can obtain education based on varying preconditions and needs.

In determining the goals for upper secondary schools, all young people must be provided with relevant education. Working life requires to a greater extent than earlier good basic knowledge both in general and in vocational subjects. Upper secondary training has to provide everyone with the opportunity of makinge a contribution to working life and of developing in their work. The branch structure as it has existed hitherto must be replaced by a more flexible system. In addition to the national branches that are drawn up centrally and made available to the municipalities, scope must also be created for branches to be drawn up at the local level.

According to interviews with politicians and experts involved in the planning of the Swedish upper secondary reform the main drive for change comes from the development of working life and better opportunities for individuals to enter higher education. However, the interviews also show that the former opinion is more fully articulated, that is, the idea of the reform is based on the policy of manpower planning rather than on the policy of individual demand.

### Major features and educational concepts

In the upper secondary school there are 16 nationally determined three year programmes, comprising 2 programmes preparatory for ensuing studies, in natural sciences and in social sciences, together with 14 vocationally orientated programmes.

The programmes are further subdivided into branches. The natural science programme has two nationally determined branches, in the natural sciences and in the technical field. Within the social sciences there are three branches, in economics, the arts and civics. Within the 14 vocationally orientated programmes there are about 28 different national branches altogether.

The branches have been drawn up so that they give not only broader but also deeper knowledge compared to the pattern of vocational training before the reform. In addition they are expected to respond to changes taking place in the industrial structure of society and to resultant demands for changes that will be imposed on schools. The branches are intended to attract girls as well as boys to as great an extent as possible.

The division in branches occurs in the second year. However, this should not prevent a school from dividing up the class in the first year in such a way that it reflects the students' choice of branch in the second year.

Parliament has defined the minimum guaranteed teaching time for the national programmes not only in terms of subjects but also in total. All programmes contain a core of subjects and activities: Swedish, English, civics, religion, mathematics, science, sports and health, arts, individual options, special projects as well as local additions to subjects and/or subject-related practice.

It is explicitly stated in the curricula that conditions should be created for integration between core and vocational subjects. Accordingly, both teachers in the vocational subjects and teachers in the core subjects have to find flexible systems with scope for collaboration. Every effort must be made to increase the cooperation between different educational organisers, types of education and between different municipalities and county councils, so as to improve the accessibility of education and to improve its quality. The coordination of available resources can occur e.g. through the creation of local knowledge centres.

At least 15 % of the total study time in the vocational national programmes is to be allocated to the place of work. The starting point for this part of education is that it should be planned and implemented on the basis of the educational and teaching goals that have been determined. The local organiser is responsible both for obtaining the necessary educational places and for the supervision of students in the practical component of their education. During this part of their education the students have a purely student status. The upper secondary school connections with employers contacts are included in the municipal school plan.

To guarantee the right of students to be accepted in the national programmes in different upper secondary schools, the government has directed that some of the study options within the national programmes are to be open to applicants from the whole country. This also provides students with greater opportunities to "direct" their own studies on the basis of individual needs and wishes. In addition it makes it possible to pass through the upper secondary school in a shorter or longer period than three years.

The Education Act stipulates that the age boundary between education for young people and adult education at the upper secondary level is 20 years of age. This means that anyone who wishes to begin his or her studies in the second half of the calendar year when he or she reaches 20 would do this as an adult student.

### Organisational implications

The approach towards the management of schools has changed dramatically during recent years. Most important was the decentralisation of responsibility from central to municipal level. A portion of the central government management is now centred on follow-up and evaluation activities.

When they leave school, students will be awarded a certificate which will contain a record of grades for all courses in upper secondary education. Student grades are awarded in relation to the demands made in the different syllabi. Grades will also be given for special project work. The syllabus will specify the criteria for awarding grades. Central tests will be developed in certain subjects to support this. It will also be possible to retake exams to achieve a higher grade in subjects that have been studied previously. As a result, the award of grades will be a continuous process and term grades will become redundant.

The changes in upper secondary school and adult education require supplementary training measures of different kinds. Many teachers need in-service training in their theoretical disciplines in order to broaden and/or deepen their knowledge. Changes in working methods and an increase in student influence reinforce the need for supplementary training not only for teachers and students but also for other personnel within the school.

### Effects

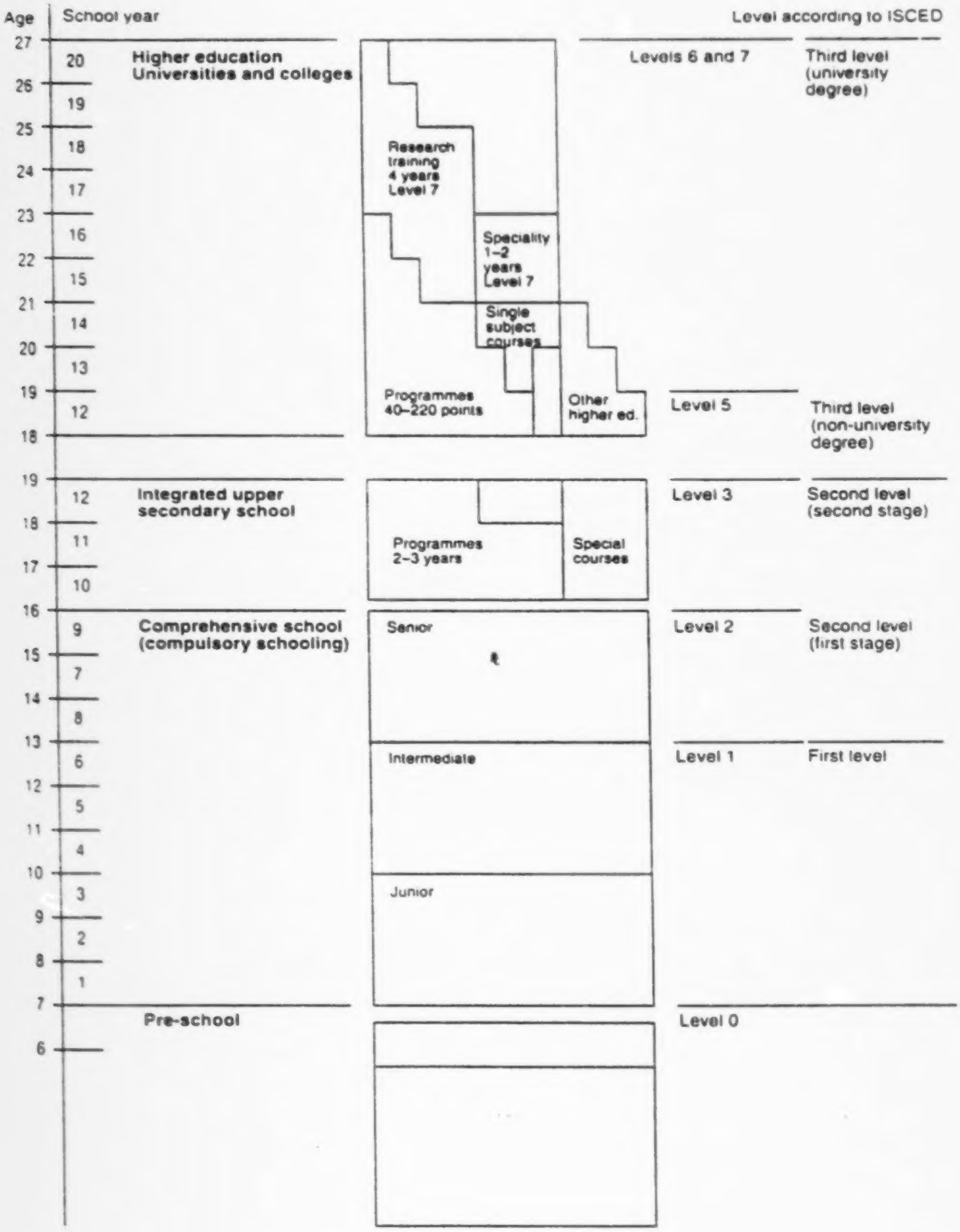
The number of students at upper secondary school has increased. The primary reasons are that all upper secondary school education and training was expanded to three years, but also that young people had difficulty in finding work. There has been an increase in the number of available places in both upper secondary schools and municipal adult education schools in an attempt to combat unemployment.

Almost 98% of all students graduating from compulsory schools in the spring of 1995 went on to attend upper secondary schools. Approximately 80% of the applicants were accepted for studies in the programme of their first choice and 90% of those beginning their studies at the upper secondary schools will complete their education within four years.

In the academic year 1995/96 about 43% attended the two programmes preparatory for ensuing studies, and approximately 49% the vocationally orientated programmes. Almost 2% attended specially designed programmes and 6% took part in the individual programmes.

The first group of students participating in the reformed upper secondary school will leave the school in spring 1998. One third of the students graduating from upper secondary schools are expected to attend a university within three years after graduating.

**Figure 8** **The Swedish education system**



Source: OECD (Ed.): Reviews of national policies for education: Sweden. Paris 1995, p. 41 (situation before the reform of upper secondary education).

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## Chapter 10

# OVERVIEW: CHARACTERISTICS OF THE SCHEMES

**Sabine Manning**

*This overview offers a synthesis of information set out in the national case studies (appendix B). Also included are contributions by Alan Brown, Monika Thum-Kraft & Edith Jonke-Hauptmann and by Lillian Larsen & Owe Liljefelt.*

The schemes under investigation have one special function in common: their dual orientation towards employment and higher education. This function, however, implies a varying balance between the two progression routes. The schemes differ, too, in several respects which are closely linked with the respective educational systems. In the following overview, the schemes are compared according to selected criteria:

- the dimension of the schemes;
- the place within upper secondary education;
- the balance of dual orientation;
- the level of vocational training;
- the access to higher education;
- the target groups;
- the organisation of learning;
- the support agencies;
- the stage of implementation.

The aim of this presentation is to identify the diversity of solutions which are provided for basically the same function of dual orientation. The overall pattern is set out in the chart below (figure 9). The individual schemes are referred to by the name of the qualification and/or the country concerned (e.g. the "German" scheme / scheme in "Germany" refers to the two pilot projects there under investigation).

## The dimension of the schemes

All schemes are part of the upper secondary level of education. If considering the dimension of schemes within this area of the education system, three groups may be distinguished:

- schemes which extend over an integral part of the whole educational sector, such as the vocational programmes or streams within the comprehensive school systems of Norway and Sweden;
- schemes which refer to individual courses or qualifications, e.g. Bac Pro (France), GNVQ (England), MBO: long courses (the Netherlands) and the WIFI Academy courses (Austria);
- schemes representing pilot projects within the established systems of vocational education and training (Germany).

This distinction between dimensions also implies different orders of quantitative significance in terms of participants involved. While all young people between 16 and19 are entitled to attend the schemes in Norway and Sweden and the great majority actually take this opportunity, somewhat smaller proportions of the relevant age group are enrolled for the qualifications in France, England and the Netherlands, and the schemes in Austria and Germany are confined to only a small minority (see also chapter 15).

## The place within upper secondary education

The place of schemes within a simplified structure of upper secondary education is set out in figure 10. Starting out from a basic division into full-time general, full-time vocational and dual/part-time vocational education (with the most prominent qualification considered in each case), two major places of schemes can be identified:

- In all seven countries, there are qualifications with dual orientation within full-time vocational education, i.e. school-based schemes, many of which have existed for decades (the BTn = baccalauréat technologique introduced long before the Bac Pro in France, the Berufsbildende Höhere Schule in Austria, several schemes of "double qualification" in individual German Laender and indeed the MBO in the Netherlands).

- Several countries (Austria, England, Germany and the Netherlands) also provide qualifications with dual orientation, as partial options or pilot projects, within part-time vocational education or within the dual system of vocation education, i.e. as work-based courses. However, schemes in the other countries also include an element of work-based education, either directly as part of the qualification (Norway) or indirectly by offering progression routes for apprentices (France/Bac Pro and Sweden) or alternative part-time provision (England). In addition, schemes of dual qualification are accessible via modular structures (across vocational education in the Netherlands and across the whole of secondary education in England).

### The balance of dual orientation

While all schemes allow for a dual orientation, they differ in the relative weight attributed to either employment or higher education. Several of them put the emphasis on employment as the prior aim (the schemes in Austria, France, the Netherlands and Sweden). This is likely to apply to the vocational streams in Norway as well, although the Reform 94 aims at a balance of the two orientations for the total provision of upper secondary education. The two remaining schemes (in England and Germany) imply a fairly equal weight of the two progression routes.

In consequence, the dual orientation of the schemes ought not to be understood in terms of an equal balance, but rather as variables with different weighting.

This is of course a normative distinction, based on the underlying concept or policy. The actual balance can only be assessed by analysing the progression route, in each case, of the students who use these schemes as pathways in their careers. Several case studies have already gone into this (see also chapter 15), and the collaborative investigation in the second phase of the project is intended to look into this aspect of the matter further.

### The level of vocational training / the target groups

Most of the schemes (in England, Germany, the Netherlands, Norway and Sweden) are part of the initial vocational training which is provided at upper secondary level for 16-19 year olds. The English, Norwegian and Swedish schemes are also open to adult students. The French scheme is specific in offering advanced education and training for students who have already completed initial vocational courses or certain stages of them. In

Austria, the scheme is exclusively geared to adults who are already qualified in a vocational area.

The more differentiated analysis attempted in figure 11 takes account of the place and function of each scheme within the total process of vocational qualification for skilled employment in the country concerned. There is a significant distinction between

- schemes providing basic vocational education as entry-level qualifications which have to be supplemented by continuing vocational training or on-the-job training (England and Sweden) and
- schemes representing full qualifications for skilled labour at craft, technician or middle-management level (Austria, France, Germany, the Netherlands, Norway).

The characteristics of education and training offered by these schemes will be analysed further in chapter 14.

**The access to higher education**

The "orientation towards higher education" implies a precondition and/or an entitlement to have access to studies, which may extend from higher vocational to academic courses. In those countries where there is a clear dividing line between vocational and academic institutions at upper secondary and tertiary level (Austria, Germany, the Netherlands), the schemes specifically qualify for access to the technical sector of higher education. In the other countries which have developed a more integrated structure of higher education (England, Norway and Sweden) and in France, the schemes serve as a general entitlement to access to higher education. However, as the case studies show, the special requirements insisted upon by the individual faculties reduce the options in actual terms. In most cases, therefore, access is in practice confined to the technical courses or to studies in the domain-related areas.

**The organisation of learning**

To start with, a distinction is made between full-time, dual and part-time provision of learning. The majority of schemes are based on full-time education, which has a strong tradition of theoretical/technical courses and is extended by offering practical assignments (England, France, the Netherlands and Sweden). The German pilot projects are part of a dual system linking a full programme of training at an enterprise with theoretical vocational instruction at school. The Norwegian scheme comprises a full-time course and an apprenticeship as successive periods of learning. An exception is the Austrian scheme, which operates as a part-time course alongside employment.

For closer analysis, the structure of subjects and the didactic approach involved in the schemes are of relevance. These aspects will be taken up in chapter 14.

### The support agencies

In terms of finance and administration, the major supporters of vocational education and training in general are the government (including central and local agencies) and industry (covering enterprises, chambers of commerce etc.).

Except for the Austrian scheme, which is industry-based, the schemes are mainly supported by the goverment. However, in all cases, industry is also involved, in connection above all with the provision of practical training, but in part with the supervision of qualifications as well.

### The stage of implementation

The initial intention of this project was to investigate fairly recent schemes in order to highlight current trends of innovation. For this reason, most of the schemes considered in this study are still in their initial stage (Austria, England, Norway and Sweden) or in a pilot phase (Germany). Only two are already established (those in France and the Netherlands), but they are also undergoing change.

This predominantly early stage of implementation allows for close observation of progress, mostly linked with monitoring activities carried out in the countries concerned; at the same time, there is less scope for assessing the impact of the schemes, in particular trends in implementing the dual orientation.

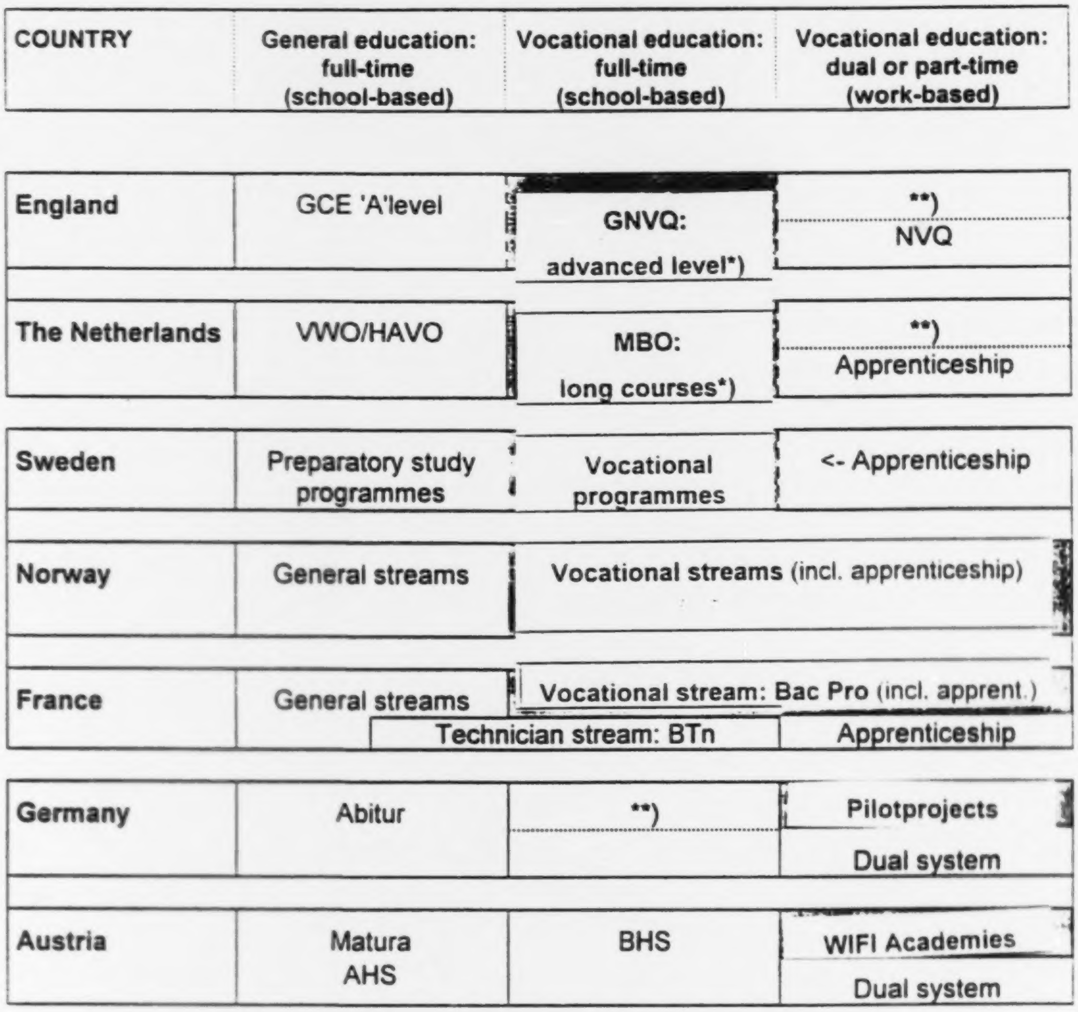
**Figure 9** Characteristics of the schemes

| Criterion | Distinction | Scheme | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | A | E | F | G | NL | N | S |
| Dimension | Educ.sector | □ | □ | □ | □ | □ | ■ | ■ |
| | Indiv.course | ■ | ■ | ■ | □ | ■ | □ | □ |
| | Indiv.project | □ | □ | □ | ■ | □ | □ | □ |
| Orientation | Employment | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | Higher educ. | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Level of training | Initial | □ | ■ | □ | ■ | ■ | ■ | ■ |
| | Further | ■ | □ | ■ | □ | □ | □ | □ |
| Target group | Young unqualif. | □ | ■ | ■ | ■ | ■ | ■ | ■ |
| | Young qualified | □ | ■ | ■ | □ | □ | □ | □ |
| | Adult qualified | ■ | ■ | ■ | □ | □ | ▨ | ▨ |
| Access to higher educ. | Techn.course | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | Acad.course | ■ | ■ | ■ | □ | □ | ■ | ■ |
| Organisation of learning | Full-time | □ | ■ | ■ | □ | ■ | ■ | ■ |
| | Dual | □ | □ | ■ | ■ | □ | ■ | □ |
| | Part-time | ■ | ■ | □ | □ | □ | □ | □ |
| Supporting agency | Government | □ | ■ | ■ | ■ | ■ | ■ | ■ |
| | Industry | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Implementation stage | Initial | ■ | ■ | □ | ■ | □ | ■ | ■ |
| | Established | □ | □ | ■ | □ | ■ | □ | □ |

■ = valid / equally valid (within a scheme)
■ = more valid (within a scheme)
▨ = less valid (within a scheme)
□ = not valid

A = Austria: WIFI Academies
E = England: GNVQ: advanced level
F = France: vocational baccalauréat (Bac Pro)
G = Germany: pilot projects within the dual system of voc. educ.
NL = The Netherlands: MBO: long courses
N = Norway: vocational streams within upper secondary education
S = Sweden: vocational programmes within upper second. educ.

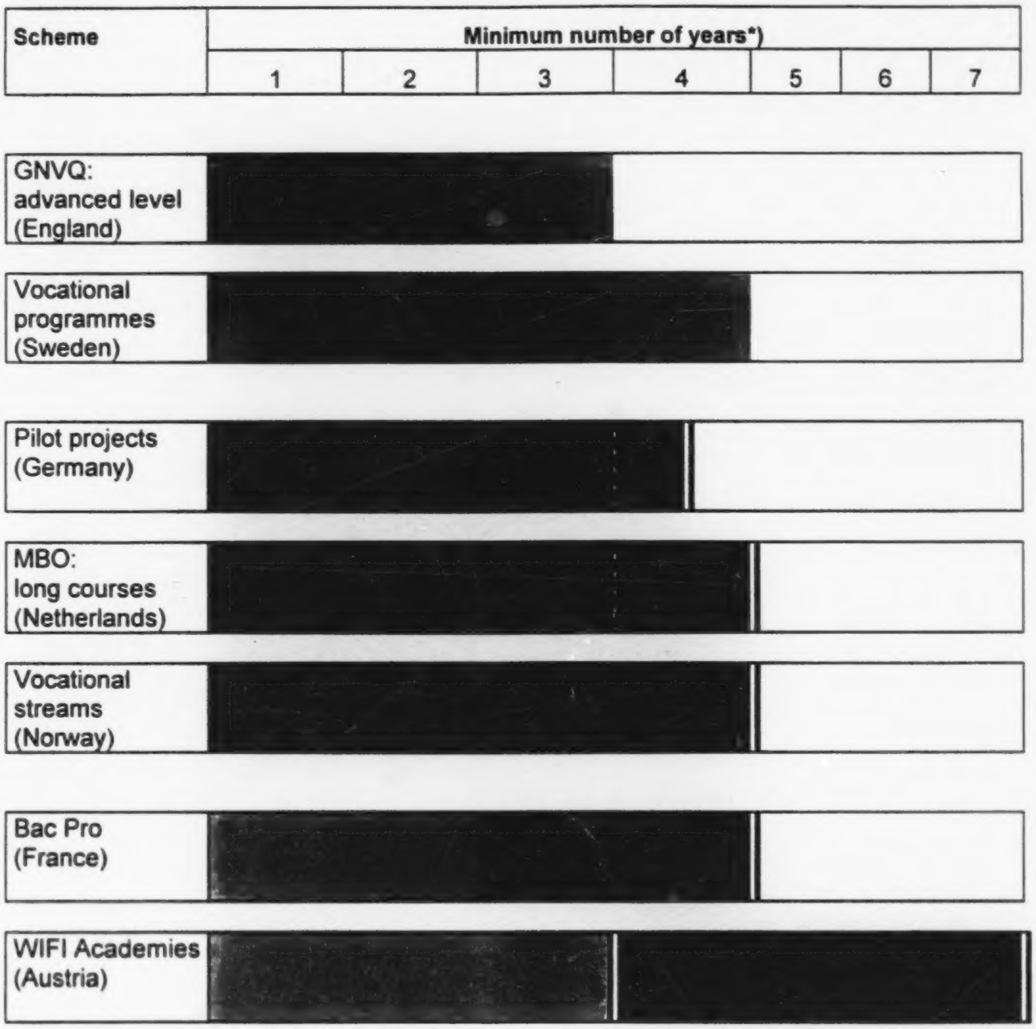
## Figure 10 The place of schemes within upper secondary education



| COUNTRY | General education: full-time (school-based) | Vocational education: full-time (school-based) | Vocational education: dual or part-time (work-based) |
|---|---|---|---|
| England | GCE 'A'level | GNVQ: advanced level*) | **)<br>NVQ |
| The Netherlands | VWO/HAVO | MBO: long courses*) | **)<br>Apprenticeship |
| Sweden | Preparatory study programmes | Vocational programmes | <- Apprenticeship |
| Norway | General streams | Vocational streams (incl. apprenticeship) | |
| France | General streams | Vocational stream: Bac Pro (incl. apprent.)<br>Technician stream: BTn | Apprenticeship |
| Germany | Abitur | **) | Pilotprojects<br>Dual system |
| Austria | Matura<br>AHS | BHS | WIFI Academies<br>Dual system |

| | |
|---|---|
| Schemes | Qualification with dual orientation : scheme in INTEQUAL project |
| | Other qualification with dual orientation |
| | Separate qualification within the national education system |
| <- | Vertical progression route (<-) or linkage via modular structure |
| *) | Scheme includes part-time provision |
| **) | Qualification with dual orientation as individual arrangements or in the form of pilot projects or as provision within individual Laender |
| AHS | Allgemeinbildende Höhere Schule |
| Bac Pro | baccalauréat professionnel |
| BTn | baccalauréat technologique |
| BHS | Berufsbildende Höhere Schule |
| GCE"A' level | General Certificate of Education: Advanced level |
| GNVQ: adv.level | General National Vocation Qualification (Advanced level) |
| HAVO | senior general secondary education |
| MBO: long courses | senior secondary vocational full-time education |
| NVQ | National Vocational Qualification |
| VWO | pre-university education |

**Figure 11** **The place of schemes within the process of vocational qualification**



*) The number of years serves only as a rough indication of time sequence after compusory education or required period of general education (for the relevant distinction between full-time, part-time and dual provision see figure 9).

Vocational education and training within the scheme
Vocational education and training prior to the scheme
Period (varying in length) of employment prior to the scheme
Vocational education and training required after the scheme
Duration of shorter courses within the scheme
Entry-level qualification
Full qualification

## Chapter 11

# THE SCHEMES IN FRANCE, NORWAY AND SWEDEN

**Egil Frøyland**

*This comparison is based on the national case studies (France, Norway and Sweden) quoted in appendix B and also on consultation within the team of partners concerned.*

### Background for change

The educational systems in France, Norway and Sweden are characterised by the dominant role of policy-making and direction at national level, so that the governments in these countries are in a strong position to reform the educational systems as considered necessary and desirable. This review focuses on what the governments have done in order to develop qualifications for employment and/or higher education. Many reasons have been advanced for such reforms: economic and ideological, technological and organisational, social and educational.

All Western countries have become very worried about national competitiveness in a globalised market. The education and training of a competent workforce have been recognised as a strategic means of promoting economic survival and progress. The advent of information technology has highlighted the need for radical changes in work organisation and produced demands for new qualifications. Increasing youth unemployment has provided a social need or justification for longer studies. Dead end situations and the unsatisfactory progress of some students provided additional educational reasons for reforms.

### Pathways toward employment and/or higher education

There is a striking difference between Norway/Sweden and France concerning the educational structure: in the French system a separate track for vocational education is offered from the 8th school year onwards (age of 13+), whereas in the Scandinavian countries there is a unitary system until the age of 16 years and a comprehensive school system which offers general and vocational education for the age group 16-19 years.

The French vocational baccalauréat was introduced in 1985 as a different track from general and technology baccalauréat tracks at upper secondary level. The programme was an attempt to break the isolation and poor reputation of basic vocational education, which had been more of a refuge for youth with relatively serious academic failures. The new programme was to satisfy the requirement of French industry for higher levels of technical and general qualifications. The vocational baccalauréat graduates have indeed become very attractive for industry and the service branch. 20-30% of the graduates have entered higher education programmes.

Compared to most countries Norway and Sweden have a strongly unitary education system. In compulsory education up to the age of 16 the students follow the same course with little or no organisational differentiation. General and vocational education have been offered in comprehensive schools since the 70s. In the 90s general subjects were strengthened in vocational education in order to open up pathways to higher education. Furthermore, former over-specialisation of the basic course - e.g. first year - was drastically cut back. The number of vocational specialisations were reduced at this level from more than 100 to 10 and 14 in Norway and Sweden respectively. Changes in the demarcation of vocational territories will of course always be controversial among various interest groups. The Swedish system, for example, offers basic courses in media and business and administration. In Norway there are no separate, basic courses in these areas - but professional interest groups are demanding such courses. The Norwegian Government and Parliament do not want to change the system until further experience has been gained. Following the basic course, however, vocational training is characterised by an increasing degree of specialisation.

Sweden started the reform in 1993 and Norway in 1994. Consequently, it is too early to assess what success the graduates will have in the labour market and in higher education.

### Curriculum

The creation of vocational education programmes is a challenging task for many reasons. Education is targeting future qualifications in a labour market which is in a continuous state of change - a labour market more or less favourably inclined towards public intervention from educational authorities. In the meantime many questions have to be addressed concerning educational objectives, learning arenas, training/working methods, evaluation and certification.

Some of the curriculum issues to be considered can be illustrated in the following diagram concerning the Norwegian system.

**Table 12 Curriculum structure of Norwegian vocational education**

| Phase | Programme | Training site | Teacher/Tutor |
|---|---|---|---|
| Years 1-2<br>School | General subjects | Classroom | Gen.subject specialist |
| | Vocational theory<br>Workshop practice | Classroom/workshop<br>Workshop | Vocational teacher |
| Years 3-4<br>In-company training | On-the-job training<br>50% accounted for as training and 50% as production | Company | Tutor (skilled person) |
| | Supplementary vocational theory | In company or outside (school, training centre) | Tutor/instructor teacher |

The model indicates how different teachers and tutors will operate at different places. Much collaboration is needed in order to promote integrated learning. The dotted lines indicate barriers. Adding more general subjects in vocational tracks does not guarantee a more integrated curriculum.

In the Norwegian model the students stay at school full-time for two years before seeking apprenticeships - or they continue on an academic pathway. In the French vocational baccalauréat and in the vocational tracks in the Swedish upper secondary schools the students alternate between school and work placements - the periods in work represent 15-20% of the total training programmes. In the Swedish system the schools are responsible for the training programmes relating to the work placements. In Norway the enterprises are responsible for the apprenticeship training - but the training must be in accordance with national curricula and be documented by a "portfolio of evidence". The quality and status of vocational education very much depends on the cooperation between the educational authorities and the bodies which take the trainees/students.

The integration of academic and vocational qualifications calls for a closer cooperation between general subject teachers and vocational teachers. The two categories of teachers represent different backgrounds and traditions, so that a functional integration of the teaching on offer is difficult to realise. In Norway project work has been made mandatory in order to stimulate cooperation and subject integration.

In the Scandinavian reforms emphasis is placed on core skills and self-reliant learning. With more focus on learning and less on teaching it becomes more apparent that the students themselves must take on the responsibility for the selection of subjects/modules and the integration of these.

Compared to the Norwegian Reform 94 the Swedish reform is less standarised. In Sweden the upper secondary education is organised as a wide range of courses from which the students can choose. The students are given points or credits for the courses they successfully complete. Furthermore, the school organisers are free to offer local and individual programmes. In 1995/96 almost 2% attended specially designed programmes and 6% individual programmes. Vocational education for adults (persons over 20) and youth is offered within the same curriculum framework - and often at the same local training centres.

### Cooperation between labour, business and educational community

The vocational baccalauréat has strengthened the cooperation between the social partners and reinforced the institutional links between enterprises and schools in France. Companies have recognised their educational role, and the traditional mistrust between the economic and educational sphere is declining. A new approach for writing training programmes has been developed in which learning objectives are deduced from vocational activities - an approach which favours experiential learning rather than the traditional teaching of separate disciplines.

The most remarkable feature of Reform 94 in Norway is probably the active participation of labour organisations in introducing the 2 + 2 model. This implies that industry, business and services provide two apprenticeship years after two years of full-time school-based vocational training. By endorsing and supporting this model the labour organisations have accepted a responsibility for making apprenticeships an integral part of a national vocational training programme - and consequently help supply the necessary apprenticeship places. In this system apprenticeship contracts guarantee training but no jobs. In Norway the apprenticeship enterprise takes full responsibility for organising the work and training in the local production context - complying with national training programmes and procedures for reporting (e.g. portfolios of evidence). Small and medium sized firms have organised branch training circles in order to cover all the training modules defined in the training programme. It remains to be seen if enough apprenticeship places can be supplied; there was a shortfall of 6.000 places - out of anticipated 17.000 - when the first batch of students left the two year school programme in 1996. 5.000 student places had to be organised in schools for these trainees, although the school alternative is generally considered to be a second best solution. The failure to provide sufficient apprenticeships may influence the attractiveness of vocational education in the future.

In the two year apprenticeship period under Reform 94, one year is recognised as training and one year as productive work. The companies are compensated for one year's training - but the way work and learning are combined is at the discretion of the enterprise. The second phase of Reform 94 will provide a unique opportunity to study a multitude of learning and working environments. This will make it possible to map out the various approaches to experiential learning, and these new insights may help to raise the parity of esteem between on-the-job training and school-based education.

The Swedish schools are responsible for providing work placements and for supervision of the students during their in-company training, e.g. the schools relocate the vocational training to enterprises. The success of this system will depend on close cooperation between the vocational teachers and the workers looking after the students.

## Conclusion

In the perspective of historical development it is worth noting that the recent reforms of upper secondary education have led to a "generalization" of vocational education. The academic tracks have not been "vocationalised" - with a notable exception for the introduction of technology subjects in French upper secondary schools.

One could apply the metaphor of "building bridges" to describe the main features of the studied reforms, that is, bridges between:

- vocational specialisations;
- vocational education and general education;
- school-based and in-company training.

In France, Norway and Sweden, as in other European countries, the reforms show evidence of the general tendency to reduce specialisation, i.e. in organising vocational programmes around key competencies shared by occupational families. This trend has been less welcomed by craft vocations than by the technician or servicing professions.

The French vocational baccalauréat has opened up a new pathway to higher education and to employment at skilled and high-skilled level. The graduates from the programme are popular in industry and the servicing branches. Reform 94 in Norway has persuaded more boys and girls to start along vocational tracks. After two years of vocational education a considerable number of boys and girls have chosen Advanced Course II with supplementary general subjects, in order to fulfil matriculation requirements. Higher education via a platform of vocational training has become a real alternative.

The divide between vocational and general education was based upon historical traditions of manual vocations and intellectual professions, so that the reforms can be seen as attempts to create a new conceptual and institutional framework for a "learning society" of to-morrow. Concepts like "Handlungskompentenz" and "core skills" bear witness to the efforts to break down the traditional understanding of competence as just "subject knowledge". The emphasis on "self-reliant learning" and the "portfolio of evidence" may indicate a trend away from a school-subject syndrome towards a model with a focus on personal, experiential learning, departing from the tendency in which education was predominantly perceived as something that precedes work and which is different from work.

School-based vocational programmes are of course expensive and in persistent danger of becoming obsolete. For this reason, efforts are being made to strengthen the functional cooperation between schools and enterprises quantitatively and qualitatively.

The quality and status of initial vocational education depends on a functional cooperation between the providers and employers of trained persons. A greater emphasis on in-service training offers a promising potential for building more bridges allowing for two-way traffic between schools and enterprises in order to enhance competence and develop learning organisations. This may help to realise the vision of lifelong learning and overcome the false dichotomy of working and learning. More in-depth studies are needed in order to shed more light on how good practice has developed and functions.

## Chapter 12

# THE SCHEMES IN ENGLAND AND THE NETHERLANDS

**Alan Brown**

*This comparison is based on the national case studies (England and the Netherlands) quoted in appendix B and also on consultation within the team of partners concerned.*

### Introduction

This review compares qualifications with a dual orientation towards employment and higher education in England and the Netherlands. In particular, the operation of senior vocational education (MBO) in the Netherlands will be compared and contrasted with the implementation of Advanced General National Vocational Qualifications in England.

The decision to group the English and Dutch qualifications, with a dual orientation towards employment and higher education, for the purposes of initial analysis was because they represent a particular way of handling the relationship between general education and vocational education traditions. That is, both GNVQ and MBO are full-time school-based vocational pathways, aimed primarily at 16-19 (20) year olds, which are clearly differentiated from academic general education pathways on the one hand and work-based routes, utilising part-time education and more explicitly vocational qualifications, on the other.

A final point is that, because one strand of the dual orientation relates to progression to higher education, this review deals only with the higher levels of the qualification in both countries, i.e. with the three- and four year MBO courses and with the Advanced GNVQ programmes.

### Overview of the place of qualifications within their respective national contexts

Both countries have a full-time senior secondary level qualification, with a vocational orientation, which is distinct from the "academic" general education pathway. The GNVQ in England and the MBO in the Netherlands also both seek to offer progression either into the labour market or into higher education.

However, there are also distinct differences between the two qualifications. For example, the Dutch MBO pathway has a clearer vocational orientation in that most MBO diplomats leave the education system while most students who complete an Advanced GNVQ programme are looking for a place in higher education.

Both MBO and GNVQ are strongly school-based, with progression to higher education being seen as increasingly significant. Both qualifications have recently been subject to major independent reviews, with one issue under scrutiny being the relationship between general and vocational education. Also in both reviews one line of argument put a case for a stronger labour market emphasis. However, the necessity of options for progression to higher education was reinforced in both reviews, which firmly reiterated that the qualifications should retain their dual orientation towards the labour market and higher education.

In both countries the vocational strand within full-time post-compulsory education, as represented by GNVQ and MBO, is increasingly seen as the major alternative to the academic general education pathway, for the 16-19 (20) age group. Work-based routes, centred on apprenticeships and more explicitly vocational qualifications, are very much a minority option in both countries for this age group.

One of the greatest contrasts between how the two qualifications are viewed in their respective systems relates directly to their maturity. Thus MBO is an established qualification, now taken by almost half the age cohort, and which is widely perceived as having currency in the labour market. It is also becoming increasingly important as a route into higher education. GNVQ, on the other hand, is a new qualification which is as yet of uncertain labour market value (with it perhaps being seen more as a pre-vocational rather than as a vocational qualification), although it is establishing itself as a route to higher education for those who complete the Advanced level programme.

The patterning of where the qualification is on offer in the two systems is markedly different. In the Netherlands, MBO is provided by large regional institutes on a full-time basis over three or four years. Whereas in England, Advanced GNVQ is mainly a two year full-time programme on offer not only in hundreds of colleges, but also in thousands of schools and sixth form colleges. The latter invariably offer GNVQ areas, while larger colleges may offer a much more extended range of GNVQ programmes.

## Nature of the curriculum offer

The MBO schools offer relatively broad courses, all with (a series of) short work placements. This particularly applies to the three year courses on offer in administration, social services and health care. The four year MBO courses on offer in some occupational fields within the four broad sectors include a full year of on-the-job training. MBO courses comprise a mix of general subjects, such as Dutch and English, and vocational subjects, although some four year courses are modular, integrating various "general" and "vocational" subjects and learning targets.

GNVQ programmes range over broad occupational areas, and the decision whether or not to offer work placements will be taken locally. In practice, this will be influenced by the extent to which there are already strong links between employers and schools or colleges. GNVQ is not organised around subjects, rather it is a unit-based scheme. A basic Advanced GNVQ programme, which is invariably on offer as a two year programme, comprises eight mandatory vocational units and four optional units. In addition, three mandatory core skills units have to be passed at level three, with the injunction that ideally the delivery of core skills should be integrated within the vocational programme, although such integration is rarely achieved in practice.

MBO courses are offered in four sectors: technical (involving preparation for entry into the metal industry, building and electrotechnics); agricultural; health care and social services; and administration and commercial services. Within these four sectors, there is a total of about 200 different specialisms available. Advanced GNVQ programmes are available in fifteen vocational areas: art and design; business; health and social care; leisure and tourism; manufacturing; construction and the built environment; hospitality and catering; science; engineering; information technology; media-communication and production; management studies; retail and distributive services; land and environment; performing arts and entertainment industries.

## Entry into the labour market

The MBO qualification is much more geared towards employment and has a more distinct vocational emphasis than the GNVQ, which could perhaps be regarded as a pre-vocational qualification. The MBO qualification is a more substantive qualification than GNVQ in two important respects. First, MBO requires three years full-time schooling as against the two years required of GNVQ students. Second, those aiming for an MBO diploma will spend a complete year in industry when they are given on-the-job training, usually in two or three different work placements. As a consequence students completing their diploma tend to go into craft (level) jobs, although technically they are qualified for middle management jobs. Similarly completion of an MBO diploma would give access to advanced courses, at a tertiary level, within the apprenticeship system. The scope for specialisation into one of about 200 different strands within the four sectors means that diplomats may enter a particular occupation with a substantive knowledge base and practical experience. Finally, despite the increasing significance of progression to HE, a very sizeable majority of those completing MBO go directly, or after a period of military service, into employment.

By contrast, GNVQ interfaces much more clearly with education rather than employment, as a sizeable majority of those completing GNVQ programmes wish to continue their education and training. Possession of a GNVQ might help a young person get a job, but this is likely to be an entry-level job, where the young person will be expected to develop their occupational skills, knowledge and understanding, and take further vocational qualifications as appropriate. It is in this sense that GNVQ could be regarded as a pre-vocational programme: in that it helps a young person orient towards a broad occupational area and gives them a platform from which they can undertake more specialised study and/or development within a more specialised employment position.

### Progression to higher education

Diploma holders from long (three or four year) MBO courses have the right to enter higher vocational education. Note though that in the Dutch system moves from general education to vocational education are possible, but that it is not possible to move in the other direction. So completion of MBO does not confer any right to enter university (WO), just the higher vocational colleges (HBO). In the English system, possession of an advanced GNVQ is increasingly recognised by higher education institutions (colleges and universities) as an acceptable entrance qualification. However, within English colleges of higher education and universities, decisions on admission are largely decentralised, with the consequence that individuals will be told whether their qualifications (and possibly their performance on other aspects of the admissions process) are sufficient to get them onto particular programmes of study. In theory then, after GNVQ, students could apply for a very wide range of subjects in any HE institution. In practice, holders of the Advanced

GNVQ have in the main applied for HE programmes, with a vocational emphasis, in the "new" universities (those that until 1992 were polytechnics). Overall then, those going into HE after completing GNVQ or MBO enter similar types of programmes in practice, even if the English students have a wider range of programmes and institutions from which to choose.

In both countries students with a vocational education background are more likely to drop out of HE than those coming from general education. Within vocational education in both systems, however, steps can be taken that increase the likelihood of students being successful when they move into higher education. These include partnership or compact arrangements between institutions from the two sectors, either at a local or regional level. Such partnerships being set up with the explicit intention of facilitating the transition form MBO to HBO, or from GNVQ to HE.

In addition to institutional links between sectors to facilitate transition, in both countries it is possible for individuals to take enriched or enhanced MBO or GNVQ programmes that can greatly affect their chances of being successful in HE. In MBO students have the right to transfer to HBO if at least 1,600 curricular hours in MBO are relevant for the proposed transfer to HBO. [Note the 1,600 relevant curricular hours have to be drawn from a total of 4,800 hours for a three year course, and 6,400 hours for a four year course.] However, students can take extra subjects offered in the optional component of the curriculum, as part of an enrichment programme, specifically aimed at facilitating HBO transfer. This almost exactly mirrors the situation with GNVQ, where judicious choice of optional units and, more particularly, additional units or studies can mean that a student is much better prepared to undertake their chosen course of study in HE.

While GNVQ can gain you entry to HE, the more substantive MBO qualification can give you advanced standing within HBO. That is, if the transfer from MBO was to a domain-related area of higher education, then your MBO study was regarded as equivalent to 42 credits out of a total of 168 credits. The effect of this was that you could complete your HBO in three years, whereas if your MBO study was not domain-related then it would require a further four years of HBO study.

In both countries HE institutions would like to see the vocational pathway strengthened academically in order to ease transition into and through HE. In the Netherlands HBO institutions saw the factors interfering with successful MBO:HBO transitions revolving around a lack of knowledge, and under-developed theoretical skills and general education, as well as problems with study skills and self-reliant learning. In England HE institutions had similar concerns about students coming from GNVQ insofar as they complained that such students did not possess a sufficiently well-developed knowledge base or theoretical understanding. They did, however, recognise that some GNVQ students were well-organised independent learners, although such attributes were more likely to shine through in project work or completion of assignments, rather than in performance in examinations.

## Conclusion

One striking feature of this comparative review is that the "middle pathways" in both systems experience tensions precisely because they have a dual orientation towards employment and higher education. Thus there were strands in the independent reviews of MBO and GNVQ arguing that the qualifications needed to be more vocationally oriented to provide a stronger platform for entry into employment. [That the criticism was accepted in the English case, but rejected in the Dutch case, reflected the fact that the Dutch MBO did have a stronger vocational emphasis than GNVQ, with its leaning more towards the need to secure progression into higher education.] At the same time, however, there were calls from HE interests in both countries that MBO and GNVQ needed academic strengthening in order to facilitate progression into higher education.

Recent independent reviews have shown that both qualifications need to be revised, if they are to fulfil effectively their dual role. The MBO has been highly successful in preparing young people for employment. However, the increasing number opting to enter HBO upon completion of their MBO meant that action was required to try to staunch the high drop out rate of MBO diplomats in HBO. In particular, greater attention was to be given to the development of general skills and study skills within long MBO courses.

MBO is an established qualification, which needs a degree of reshaping so that it can address the demands of the labour market and higher education more effectively than in the past. It is an interesting discussion point as to whether the two constituencies are coming together more in terms of the types of demands they are making (with an emphasis upon core skills/key qualifications, a commitment to continue learning, flexibility, communication skills and the like). However, while this may reduce the opposing tensions acting upon the curriculum design, the scale of the new task, even if jointly agreed, should not be under-estimated.

The case of GNVQ is altogether different. It is a new qualification and its goal of trying to create a strengthened vocational pathway within full-time education was broadly welcomed. GNVQ, however, was seriously compromised in two respects. The time scale for implementation was unrealistic and precluded reasoned development based on mature reflection upon experience and practice. More disturbing though, the whole assessment model was seriously flawed. As a consequence, at the time of writing (autumn 1996) NCVQ are in the process of issuing plans for comprehensive changes that include a new GNVQ model, new GNVQ unit structures, revised assessment criteria, a new style of external testing, a revised recording system and guidance on effective teaching and delivery strategies.

The longer-term outlook, however, is not as bleak as the above might seem to indicate for two reasons. First, this is because there is a considerable will to make a success of a full-time school-based (pre)vocational pathway. Second, GNVQs do have positive features, which have proved successful in previous pre-vocational and vocational qualifications: inclusion of core skills; use of portfolios; and practical and active approaches to learning. The overall framework (in terms of levels and occupational areas) and the clearly defined progression routes can also be seen as having some continuing value. The jettisoning of an atomistic assessment regime, coupled with an intention to give a more equal emphasis to processes and more broadly defined outcomes, mean the conditions now exist to construct a more workable and sustainable qualification with a dual orientation towards employment and higher education.

The challenge for the future for both qualifications is to develop a substantive knowledge base, and a range of core skills/key qualifications linked to the ability to communicate, the ability to work as a member of a team, flexibility, a continuing commitment to learning and the like. This should give former students a solid platform from which to enter employment or higher education. One final thought is that the Dutch system of having an extended vocational pathway, as compared to the academic pathway, may be a valuable lesson for an English system, in which the transition into, through and out of Advanced GNVQ programmes seems unduly rushed given the scale of the task to be achieved.

## Chapter 13

# THE SCHEMES IN AUSTRIA AND GERMANY

**Monika Thum-Kraft**

*This comparison is based on the national case studies (Austria and Germany) quoted in appendix B and also on consultation within the team of partners concerned.*

### Initial situation and expectations

An insufficient supply of highly qualified skilled workers, personnel for intermediate management in economic professions as well as a fluctuation in demands for vocational qualifications caused by changes in the economy, technologies, and in the environment were the reasons for initiating new concepts of vocational education and further training. Consequently, models for introducing Academies of the Chambers of Commerce were presented in Austria after a one-year phase of development. In Brandenburg the pilot project "Schwarze Pumpe" was started and in Bavaria a project "Duale Berufsausbildung und Fachhochschulreife" (dual vocational education and access qualification for higher-level studies) was initiated.

Both the pilot projects in the FRG and the WIFI Academies in Austria aim at a double qualification - vocational and generally educating - of their students. They differ in that the models in the FRG represent forms of initial vocational training whereas the WIFI Academy in Austria has been conceived as a pattern of further education for skilled workers.

Expectations regarding the economy in Austria and the FRG centre on achieving a technically and generally increased level of qualification of skilled workers via practice-orientated education. In Austria, participants in WIFI Academy courses see their opportunities in acquiring occupational upgrading alongside employment, combined with the possibility of also gaining specialised university access. Students and parents expect from the German model a number of new vocational options, thus enabling them to react faster and with more flexibility to changes in the labour market.

### Implementation in national educational systems

The German models present initiatives within the existing educational system or within current federal projects, both to overcome the basic division between vocational and general education and to offer attractive educational possibilities to promising juveniles. In contrast, WIFI Academies are no pilot projects but autonomous newly developed courses which enable skilled adults to attain an occupational upgrading and at the same time improve their general education; in this way vertical transparency is introduced into the dual system. The WIFI Academies are no federal institutions in the framework of the school administration but an initiative of business and industry.

### Curricular aspects

Whereas the German models form a local training cooperation between firms and schools and thus offer dual vocational education, the WIFI Academies may be attended part-time alongside employment.

The contents and requirement levels differ greatly, as target groups show different ages and different educational backgrounds.The German models appeal to juveniles who have completed compulsory education, and present a form of initial vocational training within the dual system. The Austrian WIFI Academies address adults and presuppose that normal education has been completed. On average, the participants are 25 years old.

A WIFI Academy course consists of six continuous terms, its contents varying between 1.200 and 1.800 teaching units according to the subject.

The Bavarian model is planned to last three years, the first two and a half years offering two days of schooling per week, the rest being spent as enterprise training. The last half year consists of full-time instruction.

The model applied in Brandenburg lasts three and a half years. It is based on the standard period of training for the careers of industrial mechanic and power electronics specialist.

## Learning contents and methods

All WIFI Academies are composed of four sections according to contents: vocational qualification, fundamentals of management, personal education, and general subjects.

The Bavarian pilot project attempts to implement the didactic principle of having a vocational guidance subject (Leitfach) called technology/technological mathematics. Special aspects from the scientific-technical and general subjects have been integrated into this guidance subject.

The learning contents of the model applied in Brandenburg has partly been taken over from the legal requirements ( KMK conventions and training framework curricula), in part it has been newly developed ( that is, there is a new coordination of contents ).

Tutorial work at the WIFI Academies is based not only on conventional seminars but attempts to introduce new methods of activating students such as lab-work, teamwork and projects. This curricular set-up allows an independent timing of the training progress only to a limited extent, e.g. by interrupting a course after an intermediate qualification and then continuing the course later.

By introducing a guidance subject the Bavarian model takes account of the principle of learning psychology - meaning that a student should explore a subject in its natural context.

The Brandenburg model has been designed as an innovation programme which gives preference to activity over reflection.

The promotion of core (key) qualifications results from the nature of the organisation of the WIFI Academies. The participants must have a high degree of flexibility and must be prepared to study hard for all career-related evening and weekend programmes. Achieving success after a continuous training course of six terms serves as a test of staying power and ability to learn. The ability to communicate and work in teams is not only achieved in theoretical instruction but practised in all sections of the course by means of discussion, teamwork, and project work.

The Bavarian model seeks especially to promote the development of vocational and personal behavioural competence.

Efficiency in both teamwork and productive discussion is encouraged in Brandenburg as a result of the high percentage of practical group work in the model.

### Final examinations and certificates

At the WIFI Academies, term certificates, intermediate qualifications, and a final examination are provided. The successful graduates are granted certificates as „Fachwirt" (business college) or „Fachtechniker" (technical college), which are accepted by economic institutions although they are not official diplomas, as the WIFI Academy curricula are not subject to School Organisation Law.

The Brandenburg model finishes with a certificate of higher vocational education, on the other hand it includes the qualifications contained in an IHK (Chamber of Industry and Commerce) examination.

The Bavarian model provides the certificate of a vocational school, the skilled workers certificate, and the admission certificate for higher technical colleges.

In Germany admission to higher-level studies at a Fachhochschule may be obtained by completing these model courses; the WIFI Academies also prepare their students for examinations giving access to domain-related university studies.

Figure 13 The schemes in Austria and Germany in comparison

| Comparison | | DB/FHR (Ger) | BA/FHR (Ger) | FA (Au) |
|---|---|---|---|---|
| Aims | Vocational and general education | ■ | ■ | ■ |
| Structure | Initial vocational training | ■ | ■ | |
| | Further vocational training | | | ■ |
| Target group | Young people, after compulsory education | ■ | ■ | |
| | Adults, skilled workers | | | ■ |
| Organisation | Dual full-time education (company, vocational school) | ■ | ■ | |
| | Part-time further training in the evening | | | ■ |
| Qualification with dual orientation | Vocational training | ■ | ■ | ■ |
| | Entrance examination for „Fachhochschulen" (non university institutions in higher education) | ■ | ■ | ■ |
| | Entrance examination for a branch-specific university study | | | ■ |
| Sponsors and supporters | Industry, Government | ■ | ■ | |
| | Chambers of Commerce | | | ■ |

| | |
|---|---|
| DB/FHR | "Duale Berufsausbildung und Fachhochschulreife" (Germany/Bavaria) |
| BA/FHR | "Berufsausbildung nach Berufsbildungsgesetz und Fachhochschulreife" (Germany/Brandenburg) |
| FA | WIFI-Fachakademien (Austria) |

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## Chapter 14

# FOCUS: INTEGRATION OF GENERAL AND VOCATIONAL EDUCATION

**Sabine Manning**

*This comparative analysis draws on the evidence provided by the national case studies (appendix B) along with the comparison of schemes at team-level (chapter 11 to 13).*

So far, we have established a common function of the seven schemes: the dual orientation towards employment and higher education (see chapter 10). This function is connected with the content and structure of the courses, in particular with their vocational and academic relevance. A key question which has run through our investigation is the extent vocational and general education are integrated. This includes the issue of competence acquired in these schemes.

The following comparative analysis starts out from two dimensions which are assumed to be relevant for the qualifications with dual orientation:

- the relationship of education and training to skilled work and
- the relationship of general education to vocational training.

In conclusion, the schemes are compared in relation to both dimensions.

## 14.1 THE RELATIONSHIP OF EDUCATION AND TRAINING TO SKILLED WORK

The schemes under investigation are nearly all of the same origin: they have their roots in vocational education and training. Only the GNVQ, although part of the vocational qualification structure, was designed from the outset as a middle way between vocational and academic routes in upper secondary education. The others, which share the vocational background, have been shaped or developed to include a fair degree of general education and transferable skills in order to reach a high level of vocational competence as well as study skills.

In consequence, the relationship to skilled work is an essential dimension of all the schemes. "Skilled work" of course stands for different concepts in the various countries concerned. On the one hand, vocational education and training may prepare for employment involving several skill levels, this being particularly the case with entry-level qualifications (schemes in England and Sweden). An alternative approach is for the qualification aimed at to be related to a clearly defined trade and/or skill level, this applying above all to schemes within dual systems of vocation education and training (Austria, Germany).

Despite these differences, however, there are comparable means of relating the courses to the requirements of work. In order to determine the extent and character of this relationship, two indicators are applied:

- the degree of vocational specialisation measured by the number of primary and secondary divisions (areas, programmes, branches etc.), with a subsequent grouping in an order of magnitude;
- the part played by practical training as it is characterised by the organisational form (assignment, traineeship and employment) and by the duration within the course.

As figure 14 shows, the analysis according to the two indicators produces different groups of schemes which range from a weak to a strong relationship of education and training to skilled work. These are the characteristics of the groups (with the schemes in brackets):

1. Prevocational training in broad areas; no compulsory practical assignment (England);
2. Training in differentiated vocational areas; practical assignments (Sweden);
3. Basic vocational training and full specialisation; extensive practical assignments or traineeship (France, the Netherlands, Norway, Germany);
4. Broad continuing training based on initial specialisation; employment (Austria).

**Figure 14** **The relationship of education and training to skilled work**

| GROUPING<br>Weak<br>⇓<br>Strong | Scheme | Vocational specialisation | Practical training |
|---|---|---|---|
| 1 | **GNVQ: advanced level (England)** | 15 areas | No compulsory practical training |
| 2 | **Vocational programmes (Sweden)** | 14 programmes > 28 branches | Practical assignments:<br>at least 15% of time |
| 3 | **Bac Pro (France)** | 49 programmes (based on initial vocational specialisation) | Practical assignments:<br>more than 12 weeks within a 2 year course |
| | **MBO: long courses (Netherlands)** | 4 sectors > about 200 strands | Practical assignments:<br>minimum 20% - maximum 60% of time |
| | **Vocational streams (Norway)** | 13 foundation courses > 210 voc. specialisations) | Traineeship:<br>2 years in the second half of the 4 year course |
| | **Pilot projects (Germany)** | (context of dual system: about 380 recognised trades) | Traineeship (dual system) |
| 4 | **WIFI Academies (Austria)** | 12 vocational fields (based on specialised initial training and work) | Employment alongside part-time course |

> "further divided into"

## 14.2 THE RELATIONSHIP OF GENERAL EDUCATION TO VOCATIONAL TRAINING

This second dimension is relevant not only for advanced studies, but also for high-level skilled work. In fact, it is orientated towards a permanent process of adapting to rising demands in qualification. This complex requirement on the part of the work process is the key to understanding attempts in these schemes to link vocational and general/academic components of education and training.

The curricula of the schemes provide for a variety of combinations involving vocational and general education. In the following comparative analysis, four stages have been identified, ranging from the additive to the integrative type of approach:

(A) separate general/theoretical subjects within the major curriculum and also as optional units;

(B) vocational application of general/theoretical subjects or combination of theoretical and vocational subjects;

(C) education and training related to transferable skills, going beyond the division of general and vocational abilities;

(D) action-orientated education and training based on work-related parts of the curriculum (projects).

The figure below (14) sets out the main characteristics of the schemes as related to these types of approach. The order in which the schemes are arranged takes account of the relevance of these types within the curriculum: from schemes showing a relative dominance of the additive approach (A) to those with a significant role of the integrative (action-orientated) approach (D). The shaded boxes refer to central components of the curriculum.

**Figure 15** **The relationship of general education to vocational training**

| Scheme | Additive | ⇒ | | Integrative |
|---|---|---|---|---|
| | Separate general/ theoretical subjects A) | Vocational application of genera/ theoretical subjects (B) | Education and training related to transferable skills (C) | Action-orientated education and training (D) |
| Vocational programmes (Sweden) | Core subjects (with individual extension): Swedish, English, civics, religion, mathematics, science, sports, arts | | | Special projects |
| MBO: long courses (Netherlands) | General/theoretical subjects; (optional component:) additional modules related to study fields | Vocational application of general subjects, e.g. foreign languages | | Project work (integration of theoretical and vocational subjects) |
| Vocational streams (Norway) | Common general subjects (plus supplement): Norwegian, English, civics, modern history, mathematics, natural sciences | Contextualising general subjects to vocational streams: multidisciplinary subjects | "The Guide" to self-reliant learning and studying habits | Activity competence: mandatory project work |
| Bac Pro (France) | General academic subjects: French, foreign language, history, geography, civics; arts and craft; physical education | Vocational subjects: science and technology including mathematics; management | | Project work as teaching principle |

| Scheme | **Additive** | ⇒ | | **Integrative** |
|---|---|---|---|---|
| | **Separate general/ theoretical subjects A)** | **Vocational application of general/ theoretical subjects (B)** | **Education and training related to transferable skills (C)** | **Action-orientated education and training (D)** |
| **GNVQ: advanced level (England)** | (Optional:) additional units in academic subjects | Mandatory core skill units (communication, application of number, informatics) | Interpersonal skills; problem-solving skills etc. | Active learning |
| **WIFI Academies (Austria)** | Unit of general subjects: English, German, mathematics; natural sciences (see B) | Unit of vocational qualification (incl. application of theoretical knowledge); Natural sciences applied to vocational fields | Units of fundamental management and personal education | Active learning (projects) |
| **Pilot projects (Germany)** [relative focus in Bavaria : B, in Brandenburg : D] | General/theoretical subjects (unless integrated) | Integration of learning contents in "vocational guidance subjects"(Leitfach) | Key qualifications as general principle | Central project; combination of learning and working tasks |

☐ Central component of the curriculum

## 14.3 THE SCHEMES IN RELATION TO BOTH DIMENSIONS

The analysis of schemes according to the two dimensions has led to different grouping and ranking. In a third step, therefore, both dimensions are combined in a matrix with the schemes arranged accordingly (figure 16).

**Figure 16** **The schemes in two dimensions**

*(I = The relationship of education and training to skilled work;*
*II = The relationship of general education to vocational training)*

| | Dimension II | | | |
|---|---|---|---|---|
| | **Additive** | | ⇒ | **Integrative** |
| | **A** | **B** | **C** | **D** |
| Dimension I<br>**Weak**<br>⇓<br>**Strong** | | | | |
| 1 | **X** | **GNVQ: advanced level (England)** | **X** | **X** |
| 2 | **Vocational programmes (Sweden)** | | | **X** |
| 3 | **Bac Pro (France)** | | | **X** |
| | **MBO: long courses (Netherlands)** | **X** | | **X** |
| | **Vocational streams (Norway)** | **X** | **X** | **X** |
| | **X** | **Pilot project (Germany: Bavaria)** | **X** | **Pilot project (Germany: Brandenburg)** |
| 4 | **WIFI Academies (Austria)** | | | **X** |

| | |
|---|---|
| A - D | Categories based on figure 15 |
| 1 - 4 | Grouping based on figure 14 |
| Scheme | Indicates the focus of the scheme (see figure 15) |
| X | Indicates additional features of the scheme (see figure 15) |

What can we conclude from this final comparison?

- There is, altogether, an emphasis on the additive combination of vocational and general education, with the latter being extended particularly in individual options (A). Three schemes focus on this (Sweden, The Netherlands, Norway), and most of the others include it as a vital part. The relevance of the additive combination seems to be fairly independent of the scheme's relationship to skilled work (all groups are included).
- Next to this, the vocational application of general subjects as the first stage of integration (B) is relevant, both as a focus (England, Germany: Bavaria) and in combination with neighbouring categories: A (France) and A/C (Austria). As with theoretical subjects (A), the relevance of applied subjects (B) can be observed in schemes ranging from weak to strong relations to skilled work (group 1, 3 and 4).
- The advanced stages of integration - training related to transferable skills (C) and action-orientated education and training (D) - are characteristic of two schemes (Austria, Germany:Brandenburg) which have, at the same time, the strongest relation to skilled work. These schemes display the potential of work-based education and training for the development of transferable skills, including study skills. Advanced forms of integration, particularly project work, are also represented as components of all the other schemes.
- The evidence suggests that several forms of combining general and vocational (A to D) education are fairly independent of or easily adaptable to different categories of courses. If this proves to be the case, it means there is considerable opportunity for exchange and transfer of experience across schemes and national systems.
- It is also apparent that the schemes of dual orientation, in this specific function and in their national context, apply or indeed create innovative course structures, curricula and didactic approaches which are of wider significance for qualitative advance in vocational education and training.

## Chapter 15

# COMPARATIVE ASSESSMENT

**Sabine Manning**

*This is a synthesis of the results of the analysis set out in the surveys of the national schemes (chapter 3 to 9) and the comparison at team level (chapter 11 to 13).*

In order to assess the schemes of qualifications with a dual orientation towards employment and higher education (dual qualifications), three questions are addressed:

- What are the determining factors for developing these schemes?
- What aspects of the structure, contents and didactics of these schemes are essential for raising the quality of education and training?
- What have the schemes achieved in practice?

The assessment is tentative in that it requires further analysis of the actual operation of the schemes in the subsequent part of the project. It should be stressed that the schemes under investigation are highly heterogeneous, including their "common" function of dual orientation (see chapter 10).

## 15.1 DETERMINING FACTORS FOR DEVELOPING SCHEMES OF DUAL QUALIFICATION

In the national context of the schemes, several common factors have been established which range from the economic to the technological, social and educational. All countries have become concerned about national competitiveness in a globalised market. The education and training of a competent workforce have been recognised as a strategic requirements for economic survival and progress. The advent of information technology has highlighted radical changes in work organisation and in demands for new qualifications. The increase in youth unemployment has provided a social need or justification for longer periods of study. Dead end courses and unsatisfactory progress of students in other respects provided educational reasons for reforms.

The development of individual schemes reflects a special emphasis on factors related to educational aims:

- The national reforms in Norway and Sweden were initiated to reorganise the education system, particularly at upper secondary level, in such a way that it could meet the demands of both the individual and society for lifelong learning and for everybody to be able to obtain qualifications for employment as well as for access to higher education.
- The ongoing reform in England has aimed at creating a coherent national qualifications framework with three different pathways: general, vocational and a middle one with dual orientation (GNVQ).
- In France, starting out from the need for higher qualification standards, the intention was to bring the majority of young people up to baccalauréat level and, by creating the Bac Pro, to also meet the demand for a new category of industrial technicians.
- The rising educational demand of young people in the Netherlands, especially for a double qualification already in operation (MBO), has put the question of further developing its dual orientation on the agenda.
- New schemes have been introduced in Austria and Germany which are designed to overcome the gap between general and vocational education, in particular to raise the attractiveness of initial vocational education for high-level achievers (Germany) and to create vertical pathways within further education (Austria).

## 15.2 ESSENTIAL ASPECTS OF THE STRUCTURE, CONTENTS AND DIDACTICS OF THE SCHEMES OF DUAL QUALIFICATION

The following aspects have been emphasised in the analysis of national schemes. They are arranged according to logic, not to order of rank, and they are relevant both for the schemes of dual qualification, and for broader fields of vocational and in part general education in the national systems concerned.

### Flexibility in curriculum design

Flexible structures of the curriculum, with frequent use of modular patterns, have been introduced in the schemes of several countries. They are above all intended to connect and in part integrate general and vocational subjects or units of learning. The combination of core subjects and vocational programmes/streams is typical of the schemes in Norway and Sweden. The GNVQ (England) is a unit-based scheme, comprising mandatory and optional units with the injunction of integrating general and vocational components, even though this has been rarely achieved in practice. In the case of the Bac Pro (France), the curriculum is grouped into four major domains, one of them integrating academic and vocational subjects. A similar structure, with four units offering partly integrated subjects, is applied in the WIFI Academies (Austria). In the German pilot projects, "guiding subjects" (Bavaria) and new didactic arrangements (Brandenburg) have been designed to integrate general and vocational contents.

### Emphasis on developing personal competence

Several concepts and terms in the various national schemes centre on a new approach to learning which aims at developing personal competence in a complex and active way and which goes well beyond the division into general and vocational abilities. There are mandatory units of "core skills" (renamed "key skills") in the GNVQ (England) and "fundamental management" and "personal education" in the WIFI Academies (Austria); the other schemes also offer learning organised around "key competencies" as part of the curriculum (France, Germany, Norway, Sweden) or intend to do so (the Netherlands). In addition, the English and Scandinavian schemes emphasise "learner independence" and "self-reliant learning", with the students taking on responsibility for selection of subjects/modules and the integration of them.

This approach is, in some cases, connected with innovative forms of assessment and certification. The use of portfolios in the GNVQ, for example, has proved successful. They provide evidence of the developing pattern in students' learning and contribute to involving students themselves in the assessment process.

As a particular means of developing competencies, nearly all schemes include forms of active learning, especially project work (see figure 15). The pilot project in Germany/Brandenburg in fact revolves round a central project and the combination of learning and working tasks.

### Collaborative work of teachers

The integration of academic and vocational qualifications calls for a closer cooperation between general subject teachers and vocational teachers. These two categories of teacher represent different backgrounds and traditions; in consequence, the functional integration of teaching is difficult to operate. In addition, the teacher in an active learning environment takes over a new function as adviser rather than instructor and has to cope with independent-minded students who have a say in their own learning process.

The Swedish reform has highlighted the need for supplementary training measures to be offered by municipalities. In Norway project work has been made mandatory in order to stimulate cooperation and subject integration. The implementation of the Bac Pro (France) has led to the creation of a special status for the educators, which attests to a higher level of recognition and salary.

### Cooperation between schools and enterprises

Most of the schemes link school-based and work-based learning, including mandatory practical assignments (France, the Netherlands, Sweden) or supplementary ones (England) or traineeships (Norway, Germany). This approach implies a need for functional cooperation between schools and enterprises, and between teachers and trainers or workers.

The Swedish schools are responsible for providing work placements and for supervising students during their in-company training. The success of this system will depend on close cooperation between the vocational teachers and the workers taking care of the students. The Norwegian reform requires the active participation of labour organisations in introducing and implementing apprenticeships. A close interrelation of school and enterprise is essential for the pilot project in Germany/Brandenburg, which is in fact based on the principle of cooperation between learning sites.

## 15.3 IMPACT OF THE SCHEMES

There are several indicators which may reveal the impact of the schemes, for instance the range of candidates entering the scheme, the rate of success within the scheme, the use made of the dual orientation as pathways, the skill level achieved in subsequent employment and the success rate in higher education studies. The evidence itself, the trends involved and the solutions attempted in order to achieve improvements are relevant in this context. The actual scope of schemes to be included in this assessment, however, is limited in that most of the schemes are still in their introductory or pilot phase.

### The range of candidates entering the scheme

The Bac Pro (France), the GNVQ (England) and the MBO (Netherlands) have been increasingly attractive, partly as an alternative to academic general education (NL) or to work-based vocational education (En). This is revealed in the growing proportion of the total entrants who take part in these schemes as against those in the "purely" general and vocational options within the upper-secondary provision of education in the systems concerned.

Several schemes also provide for the access of adults, with special consideration of their vocational experience (Austria, France, Norway, Sweden). In doing so, they show a significant potential for attracting adult students. The WIFI Academies (Austria) are in fact solely geared to this age-group, while the other schemes so far cater primarily for young applicants and operate special regulations of access for adults. This differentiation is an issue under discussion at the moment (France, Norway).

### Dual pathways

The proportion of scheme graduates who opt for higher education rather than employment has been increasing in the Netherlands (MBO), or is already higher than originally intended in England (GNVQ) and France (Bac Pro). Altogether, the proportion ranges from just under 30% for Bac Pro and MBO (with upto 40% in some sectors) to just under 50% for GNVQ.

Those going on to enter the labour market are generally successful in gaining employment (Bac Pro; MBO), although they often have to accept jobs at lower skill levels than envisaged in the schemes, particularly under the circumstances of an overall crisis of employment.

### The rate of success within the scheme and in higher education

While the Bac Pro students in France achieve a rate of success by the end of their course which characterises baccalauréat holders in general (upto 75%), the poor completion rate in GNVQ courses (just over half of all students) in England is a cause of concern.

As to progression within higher education, the Bac Pro holders in advanced technological studies (BTS) have a low, but nevertheless growing success rate (approaching 40% in 1990). On the other hand, the MBO graduates (Netherlands) after studying two years in HBO-courses have a drop-out rate of only 20%.

Still, in all three countries (England, France, the Netherlands), students with a vocational background appear more likely to drop out of higher education than those coming from general education. Steps considered to raise the chances of success (England, the Netherlands) include partnerships or compact arrangements between the institutions offering a dual qualification and those providing higher education. Also, the possibility for individuals to enter enriched or enhanced programmes within the schemes can greatly affect their subsequent prospects of success in higher education.

Altogether, the analysis reveals that the schemes considered require a careful and ongoing process of implementation and revision in order to fulfil their dual role effectively.

## Appendix A

## LIST OF ABBREVIATIONS

| | |
|---|---|
| AHS | Allgemeinbildende Höhere Schule |
| Bac Pro | baccalauréat professionnel |
| BEP | brevet d'études professionelles |
| BHS | Berufsbildende Höhere Schule |
| BMBF | Bundesministerium für Bildung, Wissenschaft, Forschung und Technologie |
| BMS | Berufsbildende Mittlere Schule |
| BTn | baccalauréat technologique |
| BTS | brevet de technicien supérieur |
| CAP | certificat d'aptitude professionelle |
| CEDEFOP | European Centre for the Development of Vocational Training |
| CEREQ | Centre d'etudes et de recherches sur les qualifications |
| CES | Centre for Educational Sociology |
| E(n) | England |
| F | France |
| FRG | Federal Republic of Germany |
| G | Germany |
| GCE 'A' level | General Certificate of Education: Advanced level |
| GCSE (A*-C) | General Certificate of Secondary Education (grades A* to C) |
| GNVQ | General National Vocational Qualification |
| HAVO | senior general secondary education |
| HBO | higher vocational education |
| HE | higher education |
| HIAK | Høgskolen I Akershus |
| ibw | Institut für Bildungsforschung der Wirtschaft |
| IHK | Industrie- und Handelskammer |
| INTEQUAL | Integrated qualifications... (acronym of LEONARDO project) |
| ISB | Staatsinstitut für Schulpädagogik und Bildungsforschung |
| ITB | Institut Technik und Bildung |
| IUT | institut universitaire de technologie |
| KMK | Kultusministerkonferenz |
| MAVO | junior general secondary education |
| MBO | senior secondary vocational full-time education |
| N | Norway |
| NCVQ | National Council for Vocational Qualifications |
| NL | The Netherlands |
| NUC | National Coordinating Unit |
| NVQ | National Vocational Qualification |
| S | Sweden |
| SCO-KI | SCO-Kohnstamm Institute |
| UK | United Kingdom |
| VBO | pre-vocational education |
| VWO / WO | pre-university education / university education |
| WIFI | Wirtschaftsförderinstitut |
| WIFO | Wissenschaftsforum Bildung und Gesellschaft e.V. |

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## Appendix B

## TITLES OF THE NATIONAL CASE STUDIES

**AUSTRIA**
WIFI-Academies: Connecting learning and training: a new form of specialised and generalised further education for skilled workers.
Monika Thum-Kraft & Edith Jonke-Hauptmann, ibw, Vienna, October 1996

**ENGLAND**
Attempting to create a 'middle pathway' between vocational and academic routes: a critical review of the introduction and implementation of General National Vocational Qualifications (GNVQs) in England.
Alan Brown, University of Surrey, Surrey, October 1996

**FRANCE**
The "Vocational Baccalauréat" in France: between new forms of work organisation and democratisation of education.
Henri Eckert & Jean-Louis Kirsch, CEREQ, Marseille, November 1996

**GERMANY**
Fachhochschule qualification and vocational certification through a new route of double qualification in Germany.
Rainer Bremer & Werner Kusch, ITB & ISB, Bremen & München, November 1996

**THE NETHERLANDS**
Dilemmas on the MBO route to higher education: double qualifications in senior vocational education (MBO) in the Netherlands.
Trudy Moerkamp & Eva Voncken, SCO-Kohnstamm Institute, Amsterdam, November 1996

**NORWAY**
The way forward to qualifications for employment and higher education for all: Reform '94 of upper secondary education in Norway.
Tor Bergli, Egil Frøyland & Lillian Larsen, HIAK, Oslo, October 1996

**SWEDEN**
"Growing with knowledge": the new upper secondary school reform in Sweden.
Göran Årman, Robert Höghielm & Owe Liljefelt, Stockholm Institute of Education, Stockholm, October 1996

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Leonardo da Vinci

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| | |
|---|---|
| Project: | **The acquisition of integrated qualifications for professional work and study - An assessment of innovative approaches in seven European countries** |
| Acronym: | **INTEQUAL** |
| Support: | European Commission (Contract No: D/95/1/217/S/III.2.a/FPI) |
| Duration: | December 1995 to November 1997 |
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### Aim

A basic issue in EU countries is how to increase the attractiveness of vocational education and training and to achieve its equality with general education. One approach initiated in a number of countries is to offer "double" or "integrated" qualifications which open up alternative routes into professional work and advanced studies.

The proposed project will be designed so as to provide descriptive and analytical knowledge for understanding the different as well as common features of integrated qualifications, scene-setting knowledge on the trend of integrating general and vocational education, and action-oriented knowledge fostering the transfer of experience of these schemes.

### Objectives

The proposed study will start out from the broad context of overall change in qualification requirements and focus on an in-depth analysis of a selection of recent schemes of integrated qualification which have been implemented in seven countries of the EU and EFTA (Austria, France, Germany, England, the Netherlands, Norway and Sweden).

Three major aspects of investigation are envisaged:

- the functioning of integrated qualifications in the context of the education system and the social and economic framework of the countries in question;
- the educational issues implied in the schemes of integrated qualification, particularly in relation to the learning process, the validation of competencies and individual guidance;
- the transfer of qualitative innovation achieved in these schemes into mainstream vocational education and across national systems via pilot projects under LEONARDO.

### Methodology and Work-Programme

The schemes selected for the two-year project will be grouped according to broadly similar patterns of qualification and educational administration in the countries concerned:

Group 1: France, Norway, Sweden;
Group 2: England, The Netherlands;
Group 3: Austria, Germany (Bavaria, Brandenburg).

In the first phase of the project, the schemes of integrated qualification will be analysed as national case studies in a comparative perspective, guided by a detailed set of research questions following the main objectives of the investigation:

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(1) the national framework of economic, social and educational change;
(2) the major features of the scheme;
(3) the educational concepts underlying the scheme;
(4) the organisational implications of the scheme;
(5) the effect of the scheme.

In the second phase, a more detailed examination of integrated qualifications is envisaged, which will focus on three issues: The character of the learning process, the validation of relevant competencies and the pattern of individual pathways. The main basis of investigation will be interviews and empirical observation in selected places.

The third phase, which is related to the previous study of issues and devoted to the transfer of experience of the schemes at national and European level, will require an original methodological analysis and an intensive dialogue with policy makers and actors. A particular point of emphasis will be the link with pilot projects under LEONARDO. A special workshop organised by each group in phase three will ensure the participation of policy makers, representatives of the social partners, and members of professional and academic bodies.

**Project Achievements**

The project sets out to produce

- descriptive and analytical knowledge on the design and function of schemes of integrated qualification. A list of these aspects and of the factors of success will be supplied.
- scene-setting knowledge on the current trend of integrating general and vocational education, especially on the basis of action-orientated learning.
- action-oriented knowledge on how to transfer experience of integrated qualifications into mainstream vocational education and across national systems, particularly in transnational pilot projects under LEONARDO.

The outcome of the first year will be a report based on seven national case studies and a comparative study. After the second year, a final report will be presented consisting of three comparative studies on selected issues and on the transfer of experience together with a synthesizing study and conclusions.

**Impact Analysis and Diffusion of Results**

The innovative approach of the schemes of integrated qualification will highlight possibilities of qualitative improvement which are applicable in wider areas of vocational education as well.

A unique contribution of this project to extending innovation in vocational education will be the special development of methodological instruments for the transfer of experience. This will be particularly applicable to the design of pilot projects under LEONARDO.

The results of the project will not only be diffused by publishing the reports and presenting the findings at conferences etc. A particular form of dissemination and application is provided by the network of contacts which will be established in the course of the project. These will include policy makers, representatives of the social partners and members of professional and academic bodies.

**Project Management Structure/Techniques and Monitoring/Evaluation Procedures**

The main responsibility for management and scientific coordination lies with the contracting organisation (WIFO, Berlin). The project coordinator cooperates with three team coordinators (HIAK Oslo, ibw Vienna and University of Surrey). The teams, which correspond to the three groups of countries under investigation, consist of two or three partners each and remain stable throughout the project.

The major decisions will be taken at the central workshops preceding each phase of the project and involving the whole partnership. In the final sub-section of the project, a joint evaluation of the procedures and results will be carried out by the partnership.

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